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1977

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# montana SURFACE water RECORDS

## *YELLOWSTONE RIVER BASIN*

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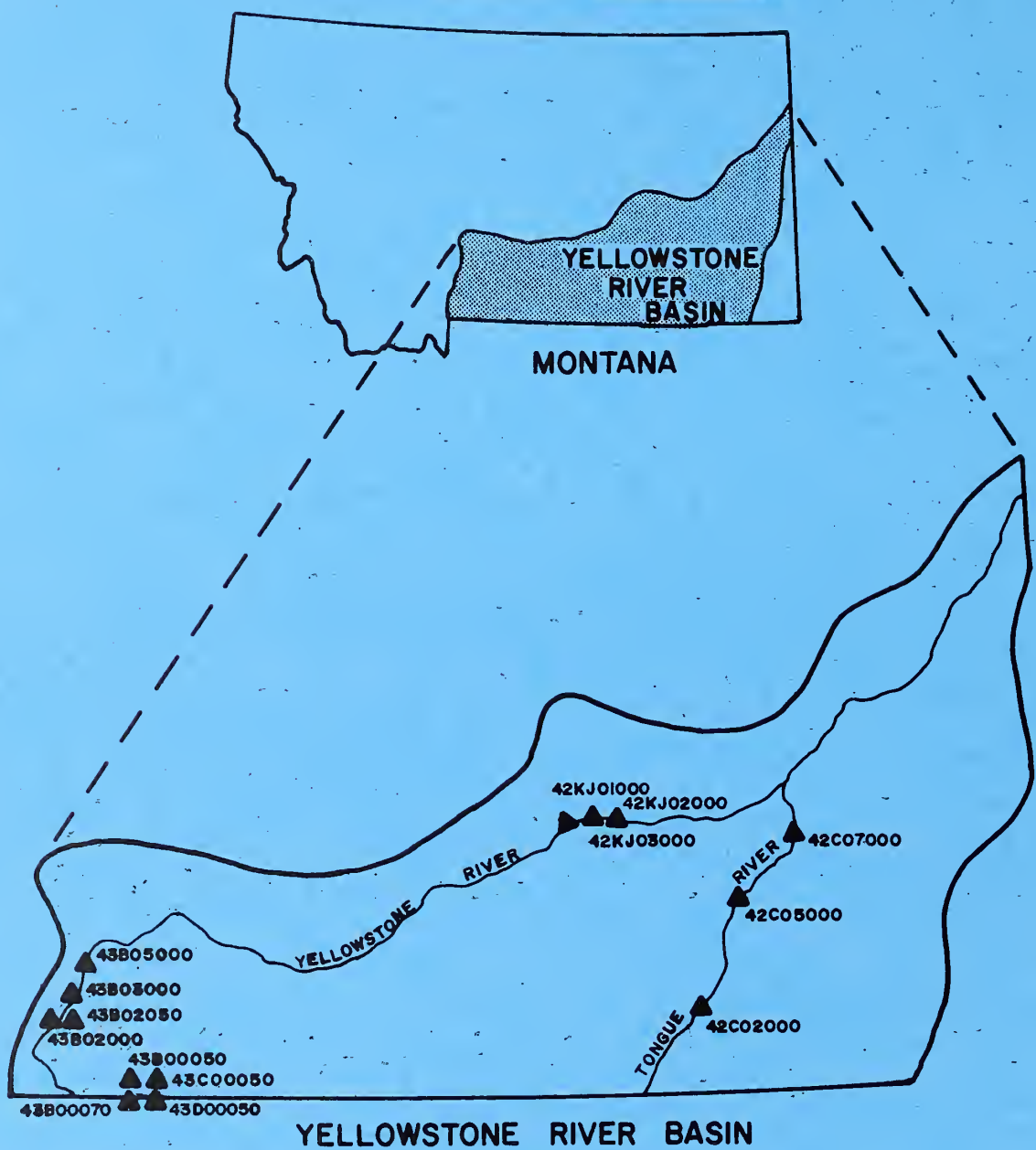
Volume 2

MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION

WATER RESOURCES DIVISION

SEPTEMBER 1977

**DNRC**



LOCATION OF GAGING STATIONS  
IN YELLOWSTONE RIVER BASIN

**MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION**

MEMBERS OF THE BOARD - CHAIRMAN CECIL WEEDING, OR WILSON F. CLARK,  
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August 23, 1977

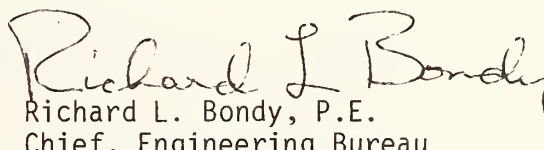
This report contains records of discharge from 1961 through 1976 for streams and canals associated with projects administered by the Montana Department of Natural Resources and Conservation in the Yellowstone River Basin.

For each of the gaging stations shown on the map opposite, sixteen annual tabulations of daily average discharges are given. Most of the gaging stations located on canals operate only during the irrigation season. A few stations, located on streams and rivers, are operational the entire year.

Additional data available from the Water Resources Division for the stations shown include instantaneous measurements and water temperature. Water quality data from stations involved in acid mine drainage studies is also available.

Montana Surface Water Records: Yellowstone River Basin, 1961-76 is the second volume of a three-volume series which includes the entire state. Volume 1 of that series reports data from stations in the Missouri River Basin in Montana; volume 3 includes records of stations in the Clark Fork Basin. All may be obtained from the Water Resources Division at the address below.

Sincerely,

  
Richard L. Bondy, P.E.  
Chief, Engineering Bureau  
WATER RESOURCES DIVISION

**WATER RESOURCES DIVISION**  
ORRIN FERRIS, ADMINISTRATOR

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*MONTANA SURFACE  
WATER RECORDS  
Yellowstone River Basin  
1961—76*





42C 02000 Tongue River below Hanging Woman Cr. near Birney, MT

LOCATION -- Lat.  $45^{\circ} 21' 43''$ , long  $106^{\circ} 30' 15''$ , in NE $\frac{1}{4}$  SE $\frac{1}{4}$  NW $\frac{1}{4}$  sec 35, T. 5S, R. 42E., Rosebud County, on left bank 1.2 mi. (1.9 km) upstream from Black Eagle Creek, 0.9 mi (1.4 km) downstream from Coal Bank Creek, 4.9 mi. (7.9 km) downstream from Hanging Woman Creek, 2.7 mi. (4.3 km) north of Birney, at river mile 151.8 (243.3 km) upstream from mouth of Tongue River.

DRAINAGE AREA -- 2,552 sq. mi. (6,610 sq. km)

GAGE -- Water stage recorder. Altitude of gage 3,090 ft. (942 m) from topography map.

AVERAGE DISCHARGE -- 1967 to 1973 (discontinued) 353,100 A.F./season (435 cu. hm/season).

EXTREMES -- Period of Record: Maximum discharge, 5,800 ft.<sup>3</sup>/s (164 m<sup>3</sup>/s) June 17, 1967. Minimum discharge, 15 ft.<sup>3</sup>/s (0.42 m<sup>3</sup>/s) May 1, 1969.

REMARKS -- Records good except for periods of no gage height record.

## TONGUE RIVER BELOW HANGING WOMAN CREEK NEAR BIRN

NUMBER

42C 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					160	2,180	3,260	450	390	300	360	
2					160	2,300	2,560	450	390	300	360	
3					160	2,340	2,560	450	390	300	360	
4					160	3,220	3,260	450	390	300	360	
5					160	3,260	1,960	450	390	300	360	
6					190	3,260	1,800	450	390	300	360	
7					210	2,950	1,760	450	390	300	360	
8					260	2,430	1,420	450	390	300	240	
9					300	2,470	1,380	390	390	212	185	
10					330	2,470	1,300	420	390	80	185	
11					360	3,080	1,020	420	390	130	270	
12					420	2,430	910	420	390	270	360	
13					420	2,430	740	420	420	270	360	
14					480	2,470	675	420	420	270	360	
15					642	2,560	642	420	300	270	360	
16					772	4,330	642	420	330	270	360	
17					805	5,800	675	420	300	300	360	
18					875	5,400	642	420	300	300	360	
19					1,080	4,900	642	420	300	300	360	
20					1,120	4,420	642	420	300	300	360	
21					1,120	4,280	642	420	300	300	360	
22					1,120	4,240	512	420	300	300	360	
23					1,120	4,240	512	420	300	158	360	
24					1,120	4,240	512	420	300	80	360	
25					1,120	4,240	512	390	300	80	340	
26					1,120	4,240	512	390	300	80	340	
27					1,180	4,190	480	350	300	80	340	
28					1,340	4,190	480	390	300	80	340	
29		-----			1,490	2,770	450	390	300	270	325	
30		-----			1,600	2,640	450	390	300	360	315	
31		-----		-----	1,800	-----	450	390	-----	360	-----	
TOTAL					23,194	103,970	34,002	13,020	10,350	7,520	10,080	
MEAN					748	3,466	1,097	420	345	243	336	
MAX					1,800	5,800	3,260	450	420	360	360	
MIN					160	2,180	450	390	300	80	185	
AC-FT					46,010	206,200	67,440	25,830	20,530	14,920	19,990	

## TONGUE RIVER BELOW HANGING WOMAN CREEK NEAR BIRN

NUMBER

42C 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				420	450	1,420	1,460	578	610	740	330	
2				420	450	1,720	1,460	578	610	578	240	
3				420	390	2,000	1,270	578	708	578	240	
4				420	480	2,090	1,080	578	675	578	240	
5				420	480	2,470	1,080	610	675	545	270	
6				420	480	2,950	1,050	610	675	545	212	
7				420	480	3,900	805	610	708	545	212	
8				420	240	3,950	708	610	708	545	158	
9				420	300	4,190	675	610	772	545	135	
10				450	480	4,380	675	642	772	578	135	
11				450	512	4,380	675	610	708	545	135	
12				450	512	4,380	675	610	740	578	135	
13				480	512	4,420	675	610	805	545	130	
14				480	512	4,420	675	610	805	420	130	
15				450	512	3,950	450	610	772	420	130	
16				450	610	4,470	330	610	772	450	130	
17				450	642	4,190	545	578	772	450	315	
18				440	675	3,310	578	545	772	512	305	
19				480	805	3,080	610	512	772	545	125	
20				480	805	2,600	610	512	805	545	125	
21				440	805	2,600	610	512	772	545	125	
22				480	840	2,640	675	480	772	512	125	
23				440	875	2,640	675	512	772	512	190	
24				480	910	2,640	675	480	740	545	420	
25				270	910	2,680	578	545	642	545	415	
26				80	1,020	2,640	610	610	772	545	415	
27				212	1,050	2,520	610	610	772	545	420	
28				330	1,050	2,050	578	610	772	545	415	
29				360	1,080	1,680	578	610	772	512	415	
30		-----		420	1,120	1,460	578	610	772	545	415	
31		-----		-----	1,160	-----	578	610	-----	545	-----	
TOTAL				12,472	21,147	91,820	22,831	18,000	22,194	16,683	7,187	
MEAN				416	682	3,061	736	581	740	538	240	
MAX				480	1,160	4,470	1,460	642	805	740	420	
MIN				80	240	1,420	330	480	610	420	125	
AC-FT				24,740	41,950	182,100	45,250	35,700	44,020	33,090	14,260	

TONGUE RIVER BELOW HANGING WOMAN CREEK NEAR 81PN

NUMBER

42C 02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					15	1,490	1,490	420	360	360	130	
2					480	1,490	1,490	420	360	270	130	
3					610	1,460	1,340	420	360	212	130	
4					675	1,190	1,340	420	330	130	130	
5					710	980	1,300	420	360	130	80	
6					875	875	1,160	390	330	130	50	
7					1,190	740	1,080	390	390	130	50	
8					1,270	708	1,080	390	390	130	110	
9					1,380	642	1,120	350	330	130	130	
10					1,380	642	945	390	330	130	130	
11					1,380	642	945	390	360	130	130	
12					1,380	642	945	390	360	130	130	
13					1,380	675	945	300	360	130	95	
14					1,380	805	980	360	360	130	40	
15					1,380	1,020	1,050	360	360	105	110	
16					1,380	1,120	2,300	212	360	30	110	
17					1,380	1,160	1,190	270	360	105	110	
18					1,380	840	1,020	360	360	130	110	
19					1,380	708	945	390	360	157	110	
20					1,420	708	945	390	360	157	110	
21					1,380	740	945	390	420	157	110	
22					1,380	740	610	360	450	157	110	
23					1,380	740	610	360	420	157	110	
24					1,380	740	708	360	390	157	115	
25					1,380	1,080	708	360	450	157	115	
26					1,380	875	708	360	450	157	120	
27					1,380	1,160	675	330	420	157	135	
28					1,380	1,230	513	330	420	157	140	
29					1,420	1,460	390	330	420	105	145	
30		-----			1,490	1,490	420	360	420	80	145	
31		-----		-----	1,490	-----	420	360	-----	130	-----	
TOTAL					37,865	28,792	30,317	11,372	11,400	4,527	3,370	
MEAN					1,221	960	978	367	380	146	112	
MAX					1,490	1,490	2,300	420	450	360	145	
MIN					15	642	390	212	330	30	40	
AC-FT					75,110	57,110	60,130	22,560	22,610	8,980	6,680	

TONGUE RIVER BELOW HANGING WOMAN CREEK NEAR 81RN

NUMBER

42C 02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				420	642	4,040	1,760	675	390	330		
2				440	642	4,090	1,720	578	390	360		
3				450	642	4,040	1,020	578	390	360		
4				440	642	4,040	512	545	390	360		
5				450	642	4,000	480	545	390	360		
6				480	642	4,000	450	545	390	330		
7				440	740	3,950	450	512	390	330		
8				430	772	3,760	610	512	390	300		
9				545	805	3,310	578	420	390	300		
10				578	910	2,770	578	450	330	300		
11				578	1,020	2,560	610	420	360	300		
12				578	1,160	2,600	610	420	360	300		
13				545	1,380	2,600	610	420	360	300		
14				578	1,420	2,640	610	420	360	270		
15				578	1,420	2,730	578	390	360	270		
16				578	1,760	2,950	610	390	360	280		
17				578	2,180	1,920	578	420	330	290		
18				578	2,180	2,900	610	390	330	290		
19				578	2,130	2,900	610	390	330	260		
20				578	2,130	2,900	610	390	360	220		
21				545	2,220	2,900	610	390	360	285		
22				430	2,220	2,900	610	390	330	285		
23				578	2,470	2,900	642	390	330	285		
24				642	2,560	2,900	642	390	360	285		
25				642	3,040	2,900	642	390	330	285		
26				642	3,130	2,860	642	360	330	285		
27				642	3,360	2,730	642	390	330	285		
28				642	3,580	2,180	642	390	330	285		
29				642	4,040	1,960	675	390	330	285		
30		-----		642	4,040	1,760	675	390	330	285		
31		-----		-----	4,040	-----	675	390	-----	285	-----	
TOTAL				16,687	58,559	90,690	21,291	13,670	10,710	9,245		
MEAN				536	1,889	3,023	687	441	357	298		
MAX				642	4,040	4,090	1,760	675	390	360		
MIN				420	642	1,760	450	360	330	220		
AC-FT				33,100	116,200	179,900	42,230	27,110	21,240	18,340		

## TONGUE RIVER BELOW HANGING WOMAN CREEK NEAR BIRN

NUMBER

42C 02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				675	980	2,050	840	420	390	270		
2				675	980	2,090	740	420	390	300		
3				675	980	2,090	642	420	390	212		
4				675	980	2,130	610	390	390	158		
5				675	980	2,130	512	420	360	158		
6				675	980	2,130	512	420	360	130		
7				675	980	2,130	512	420	360	130		
8				675	1,020	2,130	512	390	360	130		
9				675	1,120	2,090	512	390	360	130		
10				642	1,120	2,130	360	350	360	130		
11				642	1,120	2,130	330	390	360	158		
12				642	1,020	2,130	360	390	360	158		
13				642	980	2,180	360	390	360	158		
14				642	1,190	2,300	360	360	360	158		
15				642	1,230	2,300	390	390	360	158		
16				642	1,380	2,300	420	390	360	158		
17				642	1,410	2,300	420	390	300	158		
18				578	1,460	2,300	420	390	240	212		
19				545	1,640	2,300	420	390	240	212		
20				545	1,760	2,300	420	360	240	212		
21				708	1,840	2,180	420	360	240	212		
22				708	1,880	1,760	420	360	240	212		
23				708	2,020	1,340	420	360	240	212		
24				708	2,020	1,270	420	360	240	215		
25				740	1,920	945	420	360	240	245		
26				708	1,920	910	420	360	240	265		
27				708	1,880	910	420	360	240	265		
28				840	1,560	910	420	360	240	270		
29		-----		980	1,190	910	420	360	240	265		
30		-----		980	1,410	875	420	675	240	265		
31		-----		-----	1,490	-----	420	450	-----	265	-----	
TOTAL				20,667	42,440	55,650	14,272	12,285	9,300	6,181		
MEAN				689	1,369	1,855	460	396	310	195		
MAX				980	2,020	2,300	840	675	390	300		
MIN				545	980	875	330	360	240	130		
AC-FT				40,990	84,180	110,400	28,310	24,370	18,450	12,260		

## TONGUE RIVER BELOW HANGING WOMAN CREEK NEAR BIRN

NUMBER

42C 02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				1,080	515	1,640	665	403	403	458		
2				1,080	515	1,600	605	430	403	458		
3				1,080	515	1,600	575	430	403	458		
4				1,080	545	1,600	575	430	403	458		
5				1,080	545	1,600	575	403	403	458		
6				1,080	545	1,680	575	430	403	458		
7				1,040	545	1,710	575	403	403	458		
8				1,040	545	1,790	575	403	403	458		
9				1,040	545	1,830	575	403	403	458		
10				1,040	575	1,830	575	403	403	458		
11				1,010	575	1,980	575	403	403	458		
12				1,010	575	1,980	575	403	403	458		
13				1,010	575	1,940	575	403	403	458		
14				900	575	1,790	458	430	403	458		
15				698	575	1,600	458	403	403	458		
16				665	575	1,380	458	430	430	458		
17				635	575	1,150	458	430	430	458		
18				665	575	830	430	430	430	458		
19				665	665	865	458	430	430	458		
20				635	935	830	458	403	430	458		
21				635	1,230	830	458	403	430	458		
22				605	1,450	795	458	403	458	458		
23				485	1,750	795	430	403	458	458		
24				135	1,750	830	430	403	458	458		
25				38	1,560	865	430	403	458	458		
26				20	1,040	830	430	403	458	458		
27				325	1,040	795	430	403	458	458		
28				515	1,040	763	430	403	458	458		
29				515	1,010	763	403	403	458	458		
30		-----		515	1,640	763	403	403	458	458		
31		-----		-----	1,640	-----	403	403	-----	300	-----	
TOTAL				22,321	26,740	39,254	15,478	12,736	12,747	14,040		
MEAN				744	863	1,308	458	411	425	453		
MAX				1,080	1,750	1,980	665	430	458	458		
MIN				20	515	763	403	403	403	300		
AC-FT				44,270	53,040	77,860	30,700	25,260	25,280	27,850		

## TONGUE RIVER BELOW HANGING WOMAN CREEK NEAR FIRN

NUMBER

42C 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				95	795	2,240	970	515	325	485		
2				95	830	2,050	935	545	375	545		
3				95	900	2,050	935	545	375	545		
4				95	970	2,050	970	545	325	545		
5				95	1,010	2,050	935	545	325	545		
6				95	1,080	2,050	763	545	325	515		
7				95	1,190	2,090	698	545	325	515		
8				95	1,340	2,090	698	545	325	515		
9				95	1,380	2,090	698	485	325	545		
10				95	1,380	2,130	698	458	325	575		
11				95	1,380	2,500	605	458	325	575		
12				115	1,380	3,050	575	485	325	575		
13				115	1,340	3,500	545	458	325	575		
14				118	1,300	3,400	485	458	375	575		
15				118	1,190	3,000	485	430	375	575		
16				180	1,190	2,750	485	430	325	575		
17				225	1,190	2,600	430	430	325	575		
18				225	1,190	2,240	403	430	325	485		
19				300	1,230	1,860	485	430	375	575		
20				375	1,380	1,600	545	430	375	575		
21				403	1,710	1,600	545	430	403	575		
22				403	2,200	1,530	545	430	403	575		
23				403	2,480	1,340	575	403	403	575		
24				403	2,480	1,080	545	325	403	575		
25				403	2,650	970	545	325	403	575		
26				375	2,650	970	515	325	403	575		
27				275	2,700	970	515	325	458	515		
28				605	2,850	970	515	325	485	545		
29		-----		698	2,850	970	545	325	485	545		
30		-----		698	2,800	935	515	300	485	545		
31		-----		-----	2,500	-----	515	325	-----	545	-----	
TOTAL				7,582	51,515	58,725	19,218	13,550	11,131	17,135		
MEAN				253	1,662	1,958	620	437	371	553		
MAX				698	2,850	3,500	970	545	485	575		
MIN				95	795	935	403	300	325	485		
AC-FT				15,040	102,200	116,500	38,120	26,860	22,080	33,990		





42C 05000 Tongue River below Goodale Cr. at Custer Co. Line near Ashland, MT

LOCATION -- Lat.  $45^{\circ} 52' 18''$ , long  $106^{\circ} 11' 17''$ , in NE $\frac{1}{4}$  SW $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 6, T. 1 N., R. 45 E., Custer County, on left bank 3.1 mi. (5.0 km) downstream from Goodale Creek, 5.1 mi. (8.2 km) upstream from Liscolm Creek, 21 mi. (33.8 km) north of Ashland, at river mile 77.6 (124 km) upstream from mouth of Tongue River.

DRAINAGE AREA -- 4,062 sq. mi. (10,521 sq. km)

GAGE -- Water Stage recorder. Altitude of gage 2,710 ft. (826 m) from topography map.

AVERAGE DISCHARGE -- 1967 to 1973 (discontinued) 332,500 A.F./season (410 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 4,990 ft.  $^3/s$  (141 m  $^3/s$ ) June 19, 1967. Minimum discharge, 30 ft.  $^3/s$  (0.85 m  $^3/s$ ) May, 1967.

REMARKS -- Records good except for periods of no gage height record. Station was taken over by U.S.G.S. in September 1973 (06307830)

## TONGUE RIVER BELOW GOODALE CREEK AT CUSTER COUNT

NUMBER

42C 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					45	856	2,450	468	358	289	289	
2					40	1,120	2,290	443	358	289	304	
3					30	1,240	2,180	418	358	289	304	
4					30	1,280	2,230	418	358	274	289	
5					30	1,240	2,030	418	358	289	289	
6					30	1,280	1,700	443	340	289	289	
7					30	1,240	1,790	418	340	274	304	
8					40	1,410	1,700	418	340	274	322	
9					70	1,080	1,600	443	340	289	289	
10					120	1,040	1,460	397	340	289	222	
11					152	1,000	1,280	418	340	222	200	
12					178	1,120	1,240	418	358	178	200	
13					248	1,000	1,120	418	397	189	261	
14					304	1,000	1,040	418	493	235	274	
15					322	1,000	930	397	518	235	289	
16					443	1,040	856	397	418	248	274	
17					547	1,650	819	397	376	248	274	
18					576	3,800	782	397	340	235	289	
19					576	4,990	745	397	322	235	289	
20					576	4,320	708	397	322	235	261	
21					547	3,730	675	397	304	235	274	
22					576	3,530	609	397	314	248	222	
23					576	3,370	609	397	289	289	289	
24					576	3,310	576	397	289	274	295	
25					547	3,260	547	397	289	200	295	
26					518	3,260	518	376	289	169	280	
27					493	3,260	518	376	289	160	210	
28					518	3,100	518	376	289	152	160	
29		-----			576	2,990	493	376	289	130	205	
30		-----			675	2,660	468	376	274	118	230	
31		-----	-----	-----	708	-----	468	376	-----	261	-----	
TOTAL					10,697	65,176	34,949	12,579	10,289	7,341	7,972	
MEAN					345	2,173	1,127	406	343	237	266	
MAX					708	4,990	2,450	468	518	289	322	
MIN					30	856	468	376	274	118	160	
AC-FT					21,220	129,300	69,320	24,950	20,410	14,560	15,810	

## TONGUE RIVER BELOW GOODALE CREEK AT CUSTER COUNT

NUMBER

42C 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				470	380	1,090	1,410	495	645	770	545	
2				470	440	1,200	1,380	495	645	800	455	
3				470	440	1,450	1,300	495	645	670	365	
4				470	470	1,640	1,230	495	695	620	365	
5				470	470	1,790	1,090	495	720	595	365	
6				470	470	2,120	1,060	495	695	595	350	
7				470	495	2,520	991	495	695	595	338	
8				470	495	3,020	863	470	720	595	338	
9				470	395	3,580	800	495	720	595	338	
10				470	305	3,780	745	520	745	620	295	
11				455	410	3,780	695	545	770	620	270	
12				455	470	3,680	695	520	770	620	265	
13				455	495	3,780	670	495	745	595	265	
14				455	520	3,900	645	520	800	595	250	
15				455	520	3,850	645	520	800	595	245	
16				455	520	3,680	595	520	830	455	240	
17				455	570	3,680	470	520	800	470	240	
18				440	620	3,680	495	570	800	470	230	
19				455	645	2,920	520	545	800	520	280	
20				455	720	2,780	520	520	800	545	420	
21				455	745	2,420	520	495	800	570	270	
22				455	745	2,320	520	495	800	570	250	
23				455	790	2,180	545	570	800	570	235	
24				455	790	2,320	545	595	800	570	245	
25				455	863	2,320	545	545	800	570	410	
26				425	895	2,220	545	570	695	570	430	
27				295	895	2,380	520	595	770	570	440	
28				290	993	2,120	520	620	800	570	450	
29				375	1,020	1,680	520	645	800	570	420	
30		-----		365	1,090	1,560	495	645	800	570	430	
31		-----	-----	-----	1,060	-----	470	645	-----	545	-----	
TOTAL				13,260	19,736	79,440	22,564	16,645	22,705	18,185	10,039	
MEAN				442	637	2,648	728	537	757	587	335	
MAX				470	1,090	3,900	1,410	645	830	800	545	
MIN				290	305	1,090	470	470	645	455	230	
AC-FT				26,300	39,150	157,600	44,760	33,020	45,040	36,070	19,910	

## TONGUE RIVER BELOW GOODALE CREEK AT CUSTER COUNT

NUMBER

42C 05000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				720	350	1,450	1,340	440	395	470	265	
2				720	305	1,450	1,340	440	395	470	278	
3				720	395	1,450	1,340	440	395	410	278	
4				695	720	1,410	1,230	440	380	350	278	
5				695	745	1,410	1,200	425	380	315	278	
6				670	830	1,090	1,200	410	380	295	280	
7				670	960	993	1,230	410	380	285	245	
8				670	1,200	927	1,020	410	395	277	220	
9				720	1,340	830	895	395	380	288	210	
10				720	1,340	745	992	395	380	277	240	
11				720	1,340	720	863	395	380	285	275	
12				745	1,410	720	863	395	380	285	280	
13				745	1,450	720	863	410	380	285	280	
14				745	1,490	720	830	380	395	285	260	
15				695	1,490	800	800	365	380	285	230	
16				695	1,520	993	960	395	380	285	190	
17				695	1,560	1,120	1,490	395	380	278	200	
18				695	1,640	1,120	1,300	315	380	260	190	
19				695	1,640	927	1,230	395	380	270	200	
20				720	1,640	770	1,060	395	380	285	190	
21				695	1,680	745	992	410	395	255	190	
22				745	1,640	770	928	410	410	285	190	
23				770	1,600	745	745	410	455	285	200	
24				770	1,600	770	670	410	455	285	210	
25				800	1,560	800	720	410	425	285	180	
26				927	1,560	1,020	695	395	455	285	170	
27				895	1,520	927	695	395	455	285	160	
28				863	1,490	1,090	695	395	470	285	170	
29		-----		645	1,450	1,200	620	395	470	285	180	
30		-----		425	1,450	1,300	470	395	470	285	200	
31		-----		-----	1,450	-----	440	395	-----	270	-----	
TOTAL				21,685	40,365	29,732	29,716	12,465	12,135	9,370	6,717	
MEAN				723	1,302	991	959	402	405	302	224	
MAX				927	1,680	1,450	1,490	440	470	470	280	
MIN				425	305	720	440	315	380	260	160	
AC-FT				43,010	80,060	58,970	58,940	24,720	24,070	18,590	13,320	

## TONGUE RIVER BELOW GOODALE CREEK AT CUSTER COUNT

NUMBER

42C 05000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				540	750	3,180	1,690	465	290	290		
2				540	750	3,230	1,640	490	290	290		
3				570	750	3,180	1,600	440	290	290		
4				540	750	3,080	1,190	370	290	310		
5				540	750	3,130	690	370	310	310		
6				540	750	3,180	540	390	310	310		
7				540	750	3,230	490	370	310	310		
8				540	930	3,230	465	390	330	310		
9				540	1,000	3,180	515	370	330	310		
10				600	930	2,780	540	350	330	290		
11				660	1,040	2,580	515	310	290	310		
12				690	1,160	2,430	540	310	290	290		
13				660	1,230	2,430	515	330	310	290		
14				630	1,390	2,380	515	310	310	290		
15				660	1,430	2,380	490	330	310	230		
16				660	1,430	2,430	490	310	310	230		
17				630	1,690	2,530	465	290	310	230		
18				630	1,980	2,230	465	310	290	230		
19				660	2,030	2,730	440	290	290	230		
20				660	2,080	2,830	440	290	310	230		
21				660	2,130	2,830	440	290	310	225		
22				660	2,230	2,830	440	290	290	180		
23				570	2,180	2,830	465	290	290	220		
24				660	2,230	2,780	440	290	290	225		
25				690	2,380	2,730	440	290	310	230		
26				750	2,630	2,530	465	270	310	230		
27				750	2,680	2,530	465	270	310	225		
28				780	2,930	2,330	440	270	290	230		
29		-----		818	3,030	2,030	465	270	290	225		
30		-----		750	3,180	1,830	465	290	290	230		
31		-----		-----	3,180	-----	440	290	-----	225	-----	
TOTAL				19,118	52,350	81,600	19,200	10,195	9,080	8,025		
MEAN				637	1,689	2,720	619	329	303	259		
MAX				818	3,180	3,230	1,690	490	330	310		
MIN				540	750	1,830	440	270	290	180		
AC-FT				37,920	103,800	161,900	38,080	20,220	18,010	15,920		

## TONGUE RIVER BELOW GOODALE CREEK AT CUSTER COUNT

NUMBER

42C 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				855	1,000	1,480	892	310	515	215		
2				855	1,040	1,830	892	290	350	310		
3				855	1,000	1,930	780	270	330	330		
4				855	1,000	1,930	690	270	330	270		
5				812	1,040	1,930	630	270	330	185		
6				812	1,040	1,930	540	270	310	155		
7				812	1,040	1,930	465	290	330	155		
8				812	1,040	1,930	465	290	330	140		
9				812	1,040	1,930	440	290	330	140		
10				812	1,120	1,930	440	270	310	140		
11				780	1,120	1,980	370	270	310	125		
12				750	1,120	1,980	290	270	310	125		
13				720	1,080	1,980	290	270	310	125		
14				720	1,000	1,980	270	250	310	125		
15				720	1,190	2,080	250	250	310	140		
16				690	1,190	2,080	250	270	310	155		
17				690	1,310	2,080	290	270	310	155		
18				690	1,350	2,080	290	270	290	200		
19				660	1,350	2,080	290	270	230	200		
20				600	1,420	2,080	290	270	215	155		
21				600	1,560	2,080	290	250	215	125		
22				690	1,690	1,980	290	250	200	165		
23				720	1,690	1,690	290	250	200	175		
24				720	1,740	1,390	290	250	200	175		
25				750	1,740	1,310	310	250	200	175		
26				750	1,740	1,000	310	250	200	175		
27				750	1,740	968	290	250	200	195		
28				750	1,740	968	290	250	200	215		
29		-----		855	1,560	968	290	250	200	235		
30		-----		1,000	1,270	930	270	290	185	225		
31		-----		-----	1,430	-----	270	515	-----	220	-----	
TOTAL				22,897	40,390	52,434	12,304	8,535	8,370	5,625		
MEAN				763	1,303	1,748	397	275	279	181		
MAX				1,000	1,740	2,080	892	515	515	330		
MIN				600	1,000	930	250	250	185	125		
AC-FT				45,420	80,110	104,000	24,400	16,930	16,600	11,160		

## TONGUE RIVER BELOW GOODALE CREEK AT CUSTER COUNT

NUMBER

42C 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				1,190	540	1,690	818	370	390	440		
2				1,160	540	1,650	750	415	390	440		
3				1,190	540	1,650	660	415	390	440		
4				1,190	540	1,600	630	415	390	440		
5				1,190	540	1,650	600	390	390	440		
6				1,190	540	1,600	570	390	390	465		
7				1,190	540	1,650	570	350	415	465		
8				1,160	540	1,600	540	370	415	440		
9				1,120	570	1,520	540	370	390	440		
10				1,040	570	1,650	540	370	390	440		
11				1,120	570	1,650	540	370	415	440		
12				1,120	570	1,650	540	370	415	440		
13				1,080	570	1,650	540	390	390	440		
14				1,080	570	1,650	515	390	415	440		
15				855	570	1,650	465	390	390	440		
16				780	540	1,520	440	415	390	440		
17				780	540	1,310	415	370	390	440		
18				780	540	1,160	415	370	390	440		
19				780	570	968	415	415	390	465		
20				750	630	968	415	600	390	465		
21				750	855	968	440	440	390	465		
22				750	1,160	930	440	415	390	465		
23				750	1,390	893	415	390	415	465		
24				465	1,650	893	415	370	415	465		
25				290	1,650	1,080	415	370	440	465		
26				215	1,480	1,040	415	370	440	465		
27				170	1,780	968	390	370	440	465		
28				200	1,780	855	440	370	440	465		
29				490	1,780	855	440	370	440	465		
30		-----		540	1,740	855	390	370	440	465		
31		-----		-----	1,690	-----	390	370	-----	400	-----	
TOTAL				25,365	28,085	39,773	15,508	12,180	12,175	13,950		
MEAN				846	906	1,326	500	393	406	450		
MAX				1,190	1,780	1,690	818	600	440	465		
MIN				170	540	855	390	370	390	400		
AC-FT				50,310	55,710	78,890	30,760	24,160	24,150	27,670		

## TONGUE RIVER BELOW GOODALE CREEK AT CUSTER COUNT

NUMBER

42C 05000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

JAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				150	750	2,200	910	420	305	500	520	
2				138	810	2,090	910	400	340	500	520	
3				138	810	1,980	910	420	400	520	520	
4				138	840	1,870	910	440	380	520	520	
5				138	945	1,870	910	440	340	520	520	
6				138	945	1,870	875	440	320	520	560	
7				138	1,050	1,870	750	460	305	520	480	
8				138	1,170	1,930	690	440	340	520	560	
9				138	1,290	1,930	660	420	360	520	520	
10				138	1,290	1,930	660	400	340	520	480	
11				138	1,290	1,930	635	380	320	540	460	
12				138	1,290	2,320	585	400	340	560	460	
13				138	1,290	2,860	540	400	340	560	460	
14				150	1,290	3,160	520	400	340	560	460	
15				175	1,290	3,230	480	380	340	520	460	
16				175	1,170	2,800	440	380	360	520	380	
17				175	1,170	2,380	440	380	340	520	245	
18				200	1,170	2,320	420	380	340	520	340	
19				275	1,130	2,090	380	400	340	480	360	
20				320	1,170	1,820	400	400	340	540	320	
21				380	1,290	1,570	460	400	380	540	320	
22				400	1,570	1,520	480	400	380	540	340	
23				400	1,870	1,470	480	420	400	540	305	
24				400	2,090	1,370	500	400	380	540	290	
25				400	2,150	1,170	480	340	380	540	320	
26				400	2,380	980	460	305	380	540	360	
27				360	2,320	945	440	305	380	540	360	
28				360	2,320	945	420	305	420	500	340	
29			-----	500	2,380	945	400	305	460	520	320	
30			-----	660	2,440	945	420	305	480	520	305	
31			-----	-----	2,380	-----	420	305	-----	520	-----	
TOTAL				7,556	45,350	56,310	17,985	11,970	10,870	16,320	12,405	
MEAN				252	1,463	1,877	580	386	362	526	414	
MAX				660	2,440	3,230	910	460	480	560	560	
MIN				138	750	945	380	305	305	480	245	
AC-FT				14,990	89,950	111,700	35,670	23,740	21,560	32,370	24,610	





42C 07000 Tongue River at SH Ranch near Garland, MT

LOCATION -- Lat.  $45^{\circ} 58' 44''$ , long  $106^{\circ} 03' 19''$ , in  $SE\frac{1}{4} SE\frac{1}{4} SW\frac{1}{4}$  sec. 30, T. 3 N., R. 46 E., Custer County, on left bank, 2.8 mi. (4.5 km) upstream from Miller Creek, 0.8 mi. (1.3 km) downstream from Cow Creek, 32 mi. (51 km) south of Miles City, 9 mi. (14 km) southwest of Garland School, at river mile 61.8 (99.4 km) upstream from mouth of Tongue River.

DRAINAGE AREA -- 4,257 sq. mi. (11,026 sq. km).

GAGE -- Water stage recorder. Altitude of gage 2,630 (802 m) from topography map.

AVERAGE DISCHARGE -- 1967 to 1973 (discontinued) 356,600 A.F./season (439 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 5,720 ft.<sup>3</sup>/s (162 m<sup>3</sup>/s) June 19, 1967. Minimum discharge, 60 ft.<sup>3</sup>/s (1.70 m<sup>3</sup>/s), May 1967.

REMARKS -- Records good except for periods of no gage height record.

## TONGUE RIVER AT SH RANCH NEAR GARLAND

NUMBER

42C 07000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					90	1,480	2,460	480	310	310	370	
2					80	1,700	2,260	440	310	310	405	
3					60	1,880	2,200	440	310	310	405	
4					60	1,940	2,260	440	310	310	405	
5					60	2,000	2,130	405	310	340	405	
6					60	2,060	1,880	440	310	340	405	
7					60	2,260	1,640	440	310	340	400	
8					80	2,580	1,580	405	310	340	420	
9					140	2,200	1,360	405	310	340	380	
10					240	2,130	1,310	370	310	340	295	
11					310	2,200	1,210	405	340	310	270	
12					340	2,580	1,010	370	340	258	270	
13					370	2,260	910	405	370	258	340	
14					405	2,200	760	340	480	340	360	
15					440	2,260	710	340	520	340	380	
16					520	2,260	660	340	440	340	360	
17					610	4,000	660	370	405	340	360	
18					760	4,440	610	370	370	340	380	
19					910	5,720	610	370	370	340	380	
20					910	5,420	610	370	340	340	340	
21					960	4,520	565	370	340	370	360	
22					1,010	4,220	520	370	340	340	295	
23					1,010	3,940	520	370	340	340	380	
24					1,010	3,940	520	370	340	340	385	
25					1,060	3,870	520	340	310	284	385	
26					1,010	3,800	520	340	310	235	370	
27					1,010	3,800	520	340	310	212	280	
28					1,060	3,800	520	340	310	212	225	
29					1,110	3,730	520	340	310	191	275	
30		-----			1,260	2,780	480	340	310	191	305	
31		-----		-----	1,360	-----	480	340	-----	258	-----	
TOTAL					18,365	91,970	32,515	11,805	10,295	9,459	10,590	
MEAN					592	3,066	1,049	381	343	305	353	
MAX					1,360	5,720	2,460	480	520	370	420	
MIN					60	1,480	480	340	310	191	225	
AC-FT					36,430	182,400	64,490	23,420	20,420	18,760	21,010	

## TONGUE RIVER AT SH RANCH NEAR GARLAND

NUMBER

42C 07000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				565	440	1,110	1,880	520	610	810	565	
2				565	480	1,160	1,640	520	610	810	520	
3				565	520	1,420	1,580	480	660	760	370	
4				565	480	1,700	1,580	480	660	610	340	
5				565	440	1,820	1,360	480	710	610	370	
6				565	520	2,060	1,260	440	710	610	340	
7				565	520	3,460	1,260	440	710	610	340	
8				565	520	3,170	1,160	440	710	565	340	
9				565	440	3,520	960	480	710	565	340	
10				565	310	3,590	860	480	760	565	284	
11				520	370	3,800	760	480	810	565	235	
12				565	480	3,870	710	480	810	565	235	
13				565	520	4,150	710	480	760	565	235	
14				565	520	4,010	710	520	810	610	225	
15				520	520	3,940	610	520	810	610	215	
16				520	520	3,870	610	520	810	480	210	
17				520	565	3,590	610	520	810	480	210	
18				520	610	4,150	565	565	810	480	200	
19				520	610	3,520	565	565	810	520	260	
20				565	710	3,040	565	565	810	565	430	
21				565	760	2,980	520	565	810	565	245	
22				565	760	2,840	520	565	810	565	225	
23				565	810	2,780	520	610	810	565	205	
24				520	810	2,780	520	610	810	565	215	
25				520	860	2,780	520	610	810	565	420	
26				520	860	2,780	520	610	710	565	445	
27				370	960	2,780	520	610	810	565	460	
28				284	960	2,780	520	610	810	565	470	
29				310	1,010	2,460	520	610	810	565	430	
30		-----		405	1,060	2,130	520	610	810	565	445	
31		-----		-----	1,060	-----	520	610	-----	565	-----	
TOTAL				15,654	20,005	88,040	25,675	16,595	22,900	18,170	9,824	
MEAN				522	645	2,935	828	535	763	586	327	
MAX				565	1,060	4,150	1,880	610	810	810	565	
MIN				284	310	1,110	520	440	610	480	200	
AC-FT				31,070	39,680	174,600	50,930	32,920	45,420	36,040	19,490	

## TONGUE RIVER AT SH RANCH NEAR GARLAND

NUMBER

42C 07000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1				810	370	1,480	1,360	370	310	405	212	
2				810	284	1,480	1,420	370	310	405	135	
3				760	310	1,480	1,420	370	310	370	135	
4				760	660	1,420	1,310	370	310	310	212	
5				760	710	1,260	1,260	340	340	284	212	
6				710	810	1,110	1,310	340	340	258	220	
7				710	910	1,010	1,420	340	310	235	185	
8				760	1,110	910	1,160	310	310	235	165	
9				760	1,260	860	1,060	310	310	212	155	
10				760	1,310	710	1,110	310	310	212	180	
11				760	1,360	710	960	310	310	212	215	
12				760	1,360	660	910	310	310	235	220	
13				760	1,360	660	910	310	310	235	220	
14				760	1,360	660	910	310	310	235	200	
15				710	1,360	760	910	284	310	235	170	
16				710	1,360	910	960	310	310	235	135	
17				710	1,360	1,060	1,420	340	310	235	145	
18				710	1,360	1,060	1,210	258	310	191	135	
19				660	1,360	960	1,310	284	340	191	145	
20				660	1,360	760	1,110	340	310	212	135	
21				660	1,420	710	1,010	340	340	235	135	
22				710	1,420	710	960	340	340	235	135	
23				760	1,420	710	760	340	405	235	145	
24				760	1,420	710	660	340	405	235	155	
25				910	1,420	810	660	340	370	235	130	
26				1,060	1,420	1,060	660	340	405	235	120	
27				1,010	1,420	1,010	660	310	405	235	110	
28				1,010	1,360	1,010	610	310	405	235	120	
29				810	1,360	1,210	565	310	440	235	130	
30		-----		520	1,420	1,310	405	310	405	235	145	
31		-----		-----	1,480	-----	370	310	-----	235	-----	
TOTAL				23,010	36,894	29,170	30,760	10,076	10,210	7,727	4,856	
MEAN				767	1,190	972	992	325	340	249	162	
MAX				1,060	1,480	1,480	1,420	370	440	405	220	
MIN				520	284	660	370	258	310	191	110	
AC-FT				45,640	73,180	57,860	61,010	19,990	20,250	15,330	9,630	

## TONGUE RIVER AT SH RANCH NEAR GARLAND

NUMBER

42C 07000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1				565	760	3,940	1,820	520	405	370		
2				565	710	3,940	1,700	520	405	370		
3				565	710	3,940	1,700	520	405	370		
4				520	710	3,940	1,420	480	405	370		
5				520	710	3,940	860	440	440	340		
6				565	710	3,940	660	480	405	340		
7				565	710	3,870	565	480	405	340		
8				565	860	3,800	520	480	370	340		
9				565	960	3,870	565	480	370	370		
10				565	910	3,380	565	480	370	340		
11				610	1,010	2,840	565	440	370	340		
12				660	1,110	2,780	565	405	340	340		
13				660	1,210	2,720	565	405	370	370		
14				660	1,360	2,650	565	405	370	340		
15				660	1,420	2,650	520	405	370	265		
16				660	1,420	2,650	520	370	370	265		
17				660	1,580	2,840	520	370	370	265		
18				660	2,000	2,390	480	370	340	265		
19				660	2,060	3,040	480	370	340	265		
20				660	2,060	3,170	480	340	340	265		
21				660	2,130	3,170	480	340	370	255		
22				610	2,200	3,170	440	340	370	205		
23				565	2,130	3,170	440	340	370	250		
24				610	2,320	3,170	480	340	340	255		
25				660	2,460	3,100	440	370	340	265		
26				710	2,780	2,840	480	340	340	265		
27				710	2,910	2,780	480	340	370	255		
28				760	3,170	2,650	480	340	370	265		
29				810	3,240	2,200	480	370	340	255		
30		-----		760	3,730	2,000	480	370	340	265		
31		-----		-----	3,870	-----	480	370	-----	255	-----	
TOTAL				18,965	53,920	94,540	20,795	12,620	11,110	9,320		
MEAN				632	1,739	3,151	671	407	370	301		
MAX				810	3,870	3,940	1,820	520	440	370		
MIN				520	710	2,000	440	340	340	205		
AC-FT				37,620	107,000	167,500	41,250	25,030	22,040	18,490		

## TONGUE RIVER AT SH RANCH NEAR GARLAND

NUMBER

42C 07000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OFC
1				910	1,060	1,700	960	340	610	340		
2				910	1,060	1,940	910	340	370	565		
3				910	1,060	1,940	860	310	370	480		
4				860	1,060	2,000	810	310	370	370		
5				910	1,060	2,000	710	310	370	310		
6				910	1,060	2,000	660	310	370	258		
7				860	1,060	2,000	565	310	370	258		
8				910	1,060	2,000	565	340	405	258		
9				860	1,060	2,000	565	340	370	235		
10				860	1,110	2,000	565	310	340	235		
11				860	1,160	2,060	520	310	340	235		
12				810	1,160	2,130	340	310	310	235		
13				810	1,010	2,060	258	310	310	235		
14				810	1,160	2,060	258	284	340	235		
15				760	1,210	2,130	258	284	340	235		
16				760	1,210	2,260	258	284	340	258		
17				760	1,310	2,320	258	284	440	258		
18				760	1,360	2,200	284	284	440	610		
19				760	1,420	2,200	284	284	310	315		
20				660	1,580	2,200	284	284	284	260		
21				660	1,640	2,200	284	284	284	225		
22				760	1,700	2,130	284	284	310	275		
23				810	1,760	1,820	284	284	310	285		
24				760	1,760	1,480	258	284	310	285		
25				810	1,760	1,360	284	284	310	285		
26				810	1,760	1,110	310	284	340	285		
27				810	1,760	1,010	310	310	340	310		
28				810	1,760	1,010	310	310	340	335		
29				860	1,360	1,010	340	310	340	360		
30		-----		1,010	1,420	960	340	340	284	345		
31		-----		-----	1,420	-----	310	440	-----	340	-----	
TOTAL				24,750	41,330	55,290	13,486	9,552	10,567	9,515		
MEAN				825	1,333	1,843	435	308	352	307		
MAX				1,010	1,760	2,320	960	440	610	610		
MIN				660	1,010	960	258	284	284	225		
AC-FT				49,090	81,980	109,700	26,750	18,950	20,960	18,870		

## TONGUE RIVER AT SH RANCH NEAR GARLAND

NUMBER

42C 07000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				1,150	550	1,550	758	355	415	445		
2				1,150	588	1,550	758	385	415	445		
3				1,150	588	1,490	625	415	415	415		
4				1,150	550	1,490	625	415	445	415		
5				1,150	550	1,490	588	385	445	415		
6				1,150	550	1,490	588	385	385	445		
7				1,150	550	1,550	550	385	385	445		
8				1,100	588	1,600	513	385	415	445		
9				1,050	588	1,660	513	385	385	415		
10				948	588	1,890	513	385	355	415		
11				995	588	1,780	513	385	385	415		
12				995	625	1,830	513	385	415	415		
13				995	625	1,830	513	385	415	415		
14				995	625	1,890	513	385	415	445		
15				900	625	1,780	475	415	415	445		
16				757	625	1,600	415	475	415	445		
17				757	588	1,430	415	415	415	445		
18				757	588	1,260	415	385	415	415		
19				757	625	995	415	415	415	415		
20				757	668	900	415	588	415	445		
21				757	805	900	445	475	415	445		
22				757	1,100	853	445	415	415	445		
23				757	1,260	805	445	385	415	445		
24				588	1,550	805	415	385	445	445		
25				385	1,660	948	415	385	415	445		
26				328	1,320	948	385	385	445	445		
27				275	1,660	900	385	385	445	445		
28				228	1,660	805	385	385	415	445		
29				445	1,660	805	385	385	445	445		
30		-----		550	1,660	805	355	385	445	445		
31		-----		-----	1,550	-----	355	415	-----	445	-----	
TOTAL				24,883	27,757	39,629	15,048	12,498	12,480	13,495		
MEAN				829	895	1,321	485	403	416	435		
MAX				1,150	1,660	1,890	758	588	445	445		
MIN				228	550	805	355	355	355	415		
AC-FT				49,360	55,060	78,600	29,850	24,790	24,750	26,770		

## TONGUE RIVER AT SH PANCH NEAR GARLAND

NUMBER

42C 07000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				185	710	2,410	948	445	355	475		
2				185	758	2,290	948	475	355	475		
3				185	805	2,120	948	475	445	513		
4				185	805	2,010	900	513	445	513		
5				185	900	2,010	900	513	385	513		
6				185	900	2,010	900	513	355	513		
7				185	995	2,010	758	550	328	513		
8				185	1,100	2,010	710	513	355	513		
9				185	1,200	2,010	668	475	385	513		
10				185	1,260	2,010	668	475	355	513		
11				185	1,260	2,060	668	445	355	513		
12				185	1,260	2,290	588	445	328	550		
13				165	1,260	2,730	550	445	328	550		
14				165	1,260	3,120	513	445	355	550		
15				185	1,260	3,250	475	385	385	550		
16				205	1,100	2,990	445	385	385	550		
17				205	1,100	2,730	445	385	385	550		
18				228	1,100	2,730	415	385	355	550		
19				275	1,100	2,410	385	415	355	475		
20				385	1,100	2,010	385	385	355	513		
21				385	1,200	1,660	445	415	385	550		
22				415	1,430	1,600	475	415	385	550		
23				415	1,890	1,550	475	415	385	550		
24				415	2,180	1,430	513	415	415	550		
25				415	2,240	1,210	513	385	385	550		
26				415	2,410	995	475	328	385	550		
27				385	2,470	948	475	328	385	550		
28				385	2,530	948	445	328	415	513		
29				445	2,600	948	445	328	445	513		
30				625	2,660	948	445	328	475	513		
31				-----	2,660	-----	475	328	-----	513	-----	
TOTAL				8,333	45,503	59,447	18,398	13,080	11,409	16,307		
MEAN				278	1,468	1,982	593	422	380	526		
MAX				625	2,660	3,250	948	550	475	550		
MIN				165	710	948	385	328	328	475		
AC-FT				16,530	90,260	117,900	36,490	25,940	22,630	32,340		





42KJ 01000 Hysham Lower Canal below main pump near Hysham, MT

LOCATION -- Lat.  $46^{\circ} 14' 59''$ , long.  $107^{\circ} 20' 23''$ , in NW $\frac{1}{4}$  NW $\frac{1}{4}$  N $\frac{1}{4}$ W Sec. 27, T. 6 N., R. 35 E., Treasure County, on left bank, 0.1 mi. (0.2 km) downstream from main pumping station which is at Yellowstone River mile (284.4 (457.6 km), 0.1 mi. (0.2 km) south of Myers, 5.3 mi. (8.5 km) southwest of Hysham.

DRAINAGE AREA -- Above point of diversion - 37,684 sq. mi. (97,602 sq. km).

GAGE -- Water stage recorder. Altitude of gage 2,700 ft. (823 m) from topography map.

AVERAGE DISCHARGE -- 1963 to 1965 (discontinued) 17,020 A.F./season (21.0 cu. km/season).

EXTREMES -- Period of record: Maximum discharge, 130 ft.<sup>3</sup>/s (3.68 m<sup>3</sup>/s) July and August 1965. Minimum discharge, no flow at times.

REMARKS -- Records good except for periods of extreme moss growth. Station moved to 42KJ 03000 in 1966.

## HYSHAM LOWER CANAL BELOW MAIN PUMP

NUMBER

42KJ01000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1963

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	41	52	99	94			
2					0	21	89	96	94			
3					46	0	107	96	96			
4					50	0	111	96	96			
5					50	0	114	96	94			
6					50	0	111	94	91			
7					50	0	101	96	91			
8					50	0	101	96	84			
9					50	0	99	96	79			
10					50	0	99	96	81			
11					41	0	99	96	81			
12					0	0	99	96	81			
13					0	0	99	96	57			
14					28	0	99	96	41			
15					47	0	99	94	41			
16					45	0	99	94	41			
17					45	0	84	94	41			
18					45	0	72	94	41			
19					47	0	47	94	41			
20					47	0	63	91	41			
21					47	0	45	91	41			
22					47	0	50	91	41			
23					45	0	84	94	13			
24					45	0	94	96	0			
25					45	0	91	94	0			
26					43	0	91	96	0			
27					43	34	89	94	0			
28					41	52	89	94	0			
29		-----			41	52	86	94	0			
30		-----			41	52	89	94	0			
31		-----		-----	41	-----	99	94	-----		-----	
TOTAL					1,220	252	2,751	2,938	1,501			
MEAN					39.4	8.40	88.7	94.8	50.0			
MAX					50	52	114	99	96			
MIN					0	0	45	91	0			
AC-FT					2,420	500	5,460	5,830	2,980			

## HYSHAM LOWER CANAL BELOW MAIN PUMP

NUMBER

42KJ01000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1964

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	111	67	117	0			
2					0	107	67	117	0			
3					0	107	67	117	0			
4					0	110	67	117	0			
5					0	101	98	117	0			
6					0	111	117	117	0			
7					0	111	117	117	0			
8					0	94	117	117	0			
9					0	59	117	117	56			
10					0	59	117	117	67			
11					0	59	117	117	67			
12					0	59	117	117	67			
13					0	59	117	117	67			
14					0	59	117	117	67			
15					0	59	117	117	84			
16					0	55	117	117	117			
17					0	0	117	117	117			
18					0	0	117	117	117			
19					15	0	117	117	117			
20					54	0	117	78	86			
21					52	0	117	0	61			
22					59	0	117	0	61			
23					91	0	117	0	61			
24					104	0	117	0	61			
25					101	0	117	0	60			
26					99	0	117	0	60			
27					101	0	117	0	35			
28					99	0	117	0	0			
29					99	0	117	0	0			
30		-----			99	56	117	0	0			
31		-----		-----	107	-----	117	0	-----		-----	
TOTAL					1,080	1,376	3,408	2,301	1,428			
MEAN					34.8	45.9	110	74.2	47.6			
MAX					107	111	117	117	117			
MIN					0	0	67	0	0			
AC-FT					2,140	2,730	6,760	4,560	2,830			

## HYSHAM LOWER CANAL BELOW MAIN PUMP

NUMBER

42KJC1000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1965

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	69	0	111	87			
2					0	43	0	87	87			
3					0	43	0	123	60			
4					0	79	0	130	43			
5					0	87	0	130	43			
6					0	87	0	130	43			
7					0	61	36	130	43			
8					0	43	43	130	43			
9					0	43	43	128	43			
10					0	43	43	130	43			
11					0	79	43	130	43			
12					0	87	25	130	43			
13					0	75	0	130	43			
14					0	34	0	130	27			
15					0	0	0	130	0			
16					0	0	0	130	0			
17					0	0	0	130	0			
18					0	0	0	130	0			
19					39	0	46	130	0			
20					43	0	79	130	0			
21					43	0	87	107	0			
22					43	36	83	67	0			
23					43	43	112	72	0			
24					43	43	130	87	0			
25					43	17	130	87	0			
26					43	0	130	87	0			
27					79	0	130	87	0			
28					87	0	130	63	0			
29		-----			87	0	130	43	0			
30		-----			87	0	125	43	0			
31		-----		-----	87	-----	130	78	-----		-----	
TOTAL					767	1,012	1,675	3,350	691			
MEAN					24.7	33.7	54.0	108	23.0			
MAX					87	87	130	130	87			
MIN					0	0	0	43	0			
AC-FT					1,520	2,010	3,320	6,640	1,370			



42KJ 02000 Hysham Upper Canal below relift pump near Hysham, MT

LOCATION -- Lat.  $46^{\circ} 15' 04''$ , long  $107^{\circ} 18' 56''$ , in  $SE\frac{1}{4} SW\frac{1}{4} SW\frac{1}{4}$  sec. 23, T. 6 N., R. 35 E., Treasure County, on right bank 0.2 mi. (0.3 km) downstream from relift pump, 1.6 mi. (2.6 km) downstream from poing of diversion which is at river mile 284.4 (457.6 km), 1.2 mi. (1.9 km) east of Myers, 5.0 mi. (8.0 km) southwest of Hysham.

DRAINAGE AREA -- Above point of diversion - 37,684 sq. mi. (97,602 sq. km).

GAGE -- Water state recorder. Altitude of gage, 2,745 ft. (837 m) from topography map.

AVERAGE DISCHARGE -- 1963 to 1976 6,030 A.F./season (7.43 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 54 ft.  $^3/s$  ( $1.53 \text{ m}^3/s$ ), July 18 and 19, 1968. Minimum discharge, no flow at times.

REMARKS -- Records good except for periods of extreme moss growth.

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1963

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	24	14	40	38			
2					0	12	24	40	31			
3					7.5	0	28	40	26			
4					15	0	27	40	26			
5					15	0	31	38	30			
6					15	0	37	38	35			
7					15	0	37	37	37			
8					15	0	37	35	35			
9					15	0	38	35	34			
10					15	0	38	38	32			
11					16	0	40	40	32			
12					1.3	0	0	40	27			
13					0	0	0	39	30			
14					0	0	0	38	30			
15					0	0	0	38	30			
16					5.8	0	8.6	38	30			
17					15	0	38	38	30			
18					16	0	37	38	30			
19					16	0	37	38	6.0			
20					16	0	40	38	0			
21					16	0	37	38	0			
22					15	0	44	25	0			
23					15	0	44	38	0			
24					15	0	42	29	0			
25					14	0	40	37	0			
26					14	0	40	37	0			
27					14	9.3	40	35	0			
28					14	14	40	37	0			
29		-----			15	14	40	37	0			
30		-----			22	14	37	35	0			
31		-----		-----	24	-----	37	37	-----		-----	
TOTAL					376.6	87.3	952.6	1,151	569.0			
MEAN					12.1	2.91	30.7	37.1	19.0			
MAX					24	24	44	40	38			
MIN					0	0	0	25	0			
AC-FT					747	173	1,890	2,280	1,130			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1964

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	23	15	42	0			
2					0	27	15	40	0			
3					0	26	13	38	0			
4					0	26	15	38	0			
5					0	25	23	37	0			
6					0	29	30	38	0			
7					0	27	30	38	0			
8					0	25	38	38	0			
9					0	15	44	38	11			
10					0	15	46	34	14			
11					0	15	46	38	14			
12					0	15	44	38	13			
13					0	15	42	34	13			
14					0	14	40	38	13			
15					0	12	42	38	26			
16					0	15	40	38	29			
17					0	0	40	38	30			
18					0	0	40	38	29			
19					0	0	40	38	29			
20					11	0	38	25	29			
21					14	0	38	0	28			
22					22	0	38	0	28			
23					30	0	38	0	28			
24					30	0	37	0	28			
25					29	0	37	0	28			
26					29	0	35	0	20			
27					29	0	35	0	6.2			
28					28	0	37	0	0			
29					26	0	37	0	0			
30		-----			26	11	42	0	0			
31		-----		-----	24	-----	42	0	-----		-----	
TOTAL					298	335	1,097	744	416.2			
MEAN					9.61	11.2	35.4	24.0	13.9			
MAX					30	29	46	42	30			
MIN					0	0	13	0	0			
AC-FT					591	664	2,180	1,480	826			



## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJC2000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1965

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	23	0	44	42			
2					0	16	0	42	42			
3					0	16	0	42	30			
4					0	26	0	44	24			
5					0	29	0	46	24			
6					0	28	0	48	24			
7					0	27	10	48	24			
8					0	26	14	48	24			
9					0	27	14	48	24			
10					0	28	12	48	25			
11					0	37	12	48	25			
12					0	44	9.5	48	18			
13					0	37	0	46	12			
14					0	20	0	48	7.6			
15					0	0	0	48	0			
16					0	0	0	46	0			
17					0	0	0	46	0			
18					0	0	0	46	0			
19					0	0	20	46	0			
20					12	0	26	46	0			
21					15	0	11	42	0			
22					15	10	17	32	0			
23					15	15	37	33	0			
24					15	13	46	44	0			
25					16	5.8	44	44	0			
26					16	0	42	44	0			
27					16	0	40	44	0			
28					16	0	46	29	0			
29		-----			25	0	46	27	0			
30		-----			29	0	42	27	0			
31		-----		-----	29	-----	46	35	-----		-----	
TOTAL					219	427.8	534.5	1,327	345.6			
MEAN					7.06	14.3	17.2	42.8	11.5			
MAX					29	44	46	48	42			
MIN					0	0	0	27	0			
AC-FT					434	849	1,060	2,630	686			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJO2000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1966

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	37	30	38	25			
2					0	35	19	38	25			
3					0	29	6.1	38	25			
4					0	11	0	38	25			
5					0	15	0	37	25			
6					12	15	9.8	37	8.2			
7					12	15	15	37	0			
8					12	15	23	37	0			
9					12	15	26	35	0			
10					25	14	26	35	22			
11					25	14	30	34	32			
12					25	14	27	37	34			
13					24	14	27	33	34			
14					24	14	27	37	34			
15					24	14	27	37	30			
16					24	14	27	37	24			
17					24	14	27	37	22			
18					24	21	27	37	19			
19					24	26	35	37	22			
20					24	27	37	37	22			
21					24	27	38	37	22			
22					25	27	38	37	22			
23					26	26	38	31	22			
24					26	17	38	26	20			
25					26	0	38	26	22			
26					26	11	38	26	22			
27					26	23	40	26	22			
28					34	24	38	26	22			
29		-----			38	34	38	25	22			
30		-----			38	38	34	25	8.1			
31		-----		-----	37	-----	38	25	-----		-----	
TOTAL					641	600	861.9	1,043	632.3			
MEAN					20.7	20.0	27.8	33.6	21.1			
MAX					38	38	40	38	34			
MIN					0	0	0	25	0			
AC-FT					1,270	1,190	1,710	2,070	1,250			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1							0	40	37			
2							0	40	37			
3							0	40	37			
4							16	40	37			
5							16	31	37			
6							16	24	37			
7							16	35	33			
8							16	40	38			
9							6.9	40	38			
10							0	40	38			
11							0	38	29			
12							0	40	26			
13							0	38	26			
14							23	38	26			
15							29	38	26			
16							27	40	19			
17							37	42	8.0			
18							38	40	11			
19							42	40	11			
20							40	40	4.2			
21							37	40	0			
22							34	40	0			
23							32	40	0			
24							32	40	0			
25							35	40	0			
26							34	40	0			
27							32	40	0			
28							34	40	0			
29		-----					37	40	0			
30		-----					38	38	0			
31		-----		-----		-----	40	37	-----		-----	
TOTAL							707.9	1,199	555.2			
MEAN							22.8	38.7	18.5			
MAX							42	42	38			
MIN							0	24	0			
AC-FT							1,400	2,380	1,100			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0		0	48	16			
2					0		0	48	16			
3					0		0	48	27			
4					1.6		0	48	29			
5					0		0	48	29			
6					7.5		0	46	29			
7					12		0	46	29			
8					22		0	46	29			
9					24		0	44	29			
10					24		2.6	44	38			
11					24		20	44	42			
12					31		21	42	42			
13					38		28	42	42			
14					38		32	38	42			
15					20		34	38	37			
16					0		34	46	26			
17					0		48	46	27			
18					0		54	30	27			
19					0		54	29	27			
20					28		52	28	27			
21					35		50	28	17			
22					26		50	28	0			
23					4.2		48	8.6	0			
24					0		50	0	0			
25					0		50	0	0			
26					0		48	0	0			
27					0		48	10	0			
28					9.8		38	14	0			
29					12		48	15	0			
30					0		48	14	0			
31		-----		-----	0	-----	48	15	-----		-----	
TOTAL					357.1	0	905.6	981.6	627			
MEAN					11.5	0	29.2	31.7	20.9			
MAX					38	0	54	48	42			
MIN					0	0	0	0	0			
AC-FT					708	0	1,800	1,950	1,240			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	30	0	40	35			
2					0	27	0	38	35			
3					0	24	0	40	35			
4					0	24	0	40	35			
5					0	23	0	38	35			
6					0	23	0	37	37			
7					0	23	0	37	37			
8					0	23	0	37	37			
9					0	15	0	37	37			
10					0	11	0	37	38			
11					0	11	0	37	37			
12					0	15	0	37	37			
13					0	15	0	38	37			
14					0	15	9.8	37	37			
15					0	15	0	37	27			
16					0	15	12	37	23			
17					0	15	15	37	23			
18					0	15	24	37	23			
19					0	15	27	35	23			
20					16	15	26	35	24			
21					15	14	26	35	27			
22					15	14	26	35	27			
23					15	23	26	35	27			
24					15	26	34	34	27			
25					15	25	40	34	27			
26					15	4.9	38	34	27			
27					15	0	38	34	27			
28					15	0	40	34	26			
29		-----			27	0	40	34	18			
30		-----			30	0	40	34	0			
31		-----		-----	31	-----	40	35	-----		-----	
TOTAL					224	475.9	501.8	1,126	885			
MEAN					7.23	15.9	16.2	36.3	29.5			
MAX					31	30	40	40	38			
MIN					0	0	0	34	0			
AC-FT					444	944	955	2,230	1,760			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						0	46	44	24			
2						0	44	44	29			
3						0	44	34	29			
4						0	44	19	29			
5						0	44	42	29			
6						0	44	42	29			
7						0	44	42	29			
8						0	44	40	29			
9						0	44	40	29			
10						12	44	40	29			
11						13	44	40	29			
12						8.5	44	42	29			
13						0	44	42	29			
14						0	42	42	29			
15						0	40	42	28			
16						0	40	42	27			
17						6.8	38	42	27			
18						11	37	42	22			
19						11	37	42	11			
20						11	38	42	5.6			
21						11	38	44	0			
22						11	40	40	0			
23						12	40	42	0			
24						12	38	46	0			
25						12	38	44	0			
26						13	38	44	0			
27						42	38	44	0			
28						42	38	44	0			
29		-----				44	38	32	0			
30		-----				42	37	13	0			
31		-----		-----		-----	40	13	-----		-----	
TOTAL						314.3	1,269	1,211	521.6			
MEAN						10.5	40.9	39.1	17.4			
MAX						44	46	46	29			
MIN						0	37	13	0			
AC-FT						623	2,520	2,400	1,030			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

DISCHARGE, IN CU81C FEET PER SECONO, CALENDAR YEAR 1971

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1						0	40	40				
2						0	40	48				
3						0	42	48				
4						0	40	48				
5						0	40	46				
6						0	42	46				
7						0	44	44				
8						0	42	46				
9						0	40	46				
10						0	44	44				
11						0	44	44				
12						0	44	44				
13						0	44	42				
14						0	44	42				
15						0	46	42				
16						0	44	40				
17						0	46	40				
18						0	46	35				
19						0	44	36				
20						0	44	38				
21						14	44	40				
22						12	46	40				
23						12	44	40				
24						20	44	42				
25						28	44	42				
26						28	44	42				
27						28	44	40				
28						36	44	44				
29		-----				44	44	44				
30		-----				42	46	18				
31		-----		-----		-----	46	0	-----		-----	
TOTAL						264	1,350	1,251	0			
MEAN						8.80	43.5	40.4	0			
MAX						44	46	48	0			
MIN						0	40	0	0			
AC-FT						524	2,680	2,480	0			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

DISCHARGE, IN CU81C FEET PER SECOND, CALENDAR YEAR 1972

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	13	44	42	29			
2					0	13	44	42	29			
3					0	12	44	42	20			
4					0	12	44	42	13			
5					0	12	40	42	13			
6					0	12	40	42	13			
7					0	12	40	40	13			
8					0	12	40	40	13			
9					0	12	40	40	13			
10					0	12	40	44	14			
11					0	12	40	44	14			
12					0	12	40	44	23			
13					0	12	40	44	29			
14					0	12	40	20	29			
15					0	12	40	29	29			
16					0	12	40	30	30			
17					0	22	40	30	30			
18					8.3	28	30	34	30			
19					7.5	29	33	48	30			
20					0	27	40	32	30			
21					0	25	3.3	30	29			
22					0	25	0	30	30			
23					9.1	26	0	30	22			
24					13	25	33	30	14			
25					13	40	42	30	5.8			
26					13	48	7.1	30	0			
27					13	48	18	30	0			
28					13	48	23	30	0			
29					13	44	16	30	0			
30		-----			11	44	42	29	0			
31		-----		-----	13	-----	42	29	-----		-----	
TOTAL					126.9	673	1,025.4	1,099	544.8			
MEAN					4.09	22.4	33.1	35.5	18.2			
MAX					13	48	44	48	30			
MIN					0	12	0	20	0			
AC-FT					252	1,330	2,030	2,180	1,080			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	20	27	38	42			
2					0	20	28	38	42			
3					0	11	27	38	0			
4					0	0	25	37	0			
5					0	0	37	37	0			
6					0	0	42	38	15			
7					0	11	42	38	15			
8					0	17	38	38	15			
9					0	16	30	38	15			
10					0	16	44	38	15			
11					0	16	40	38	14			
12					0	16	42	38	14			
13					0	16	42	38	15			
14					0	15	40	40	9.2			
15					0	18	40	42	0			
16					0	18	40	44	0			
17					0	19	44	46	0			
18					0	19	44	31	0			
19					0	0	44	28	0			
20					0	0	44	28	0			
21					0	0	44	20	0			
22					0	0	42	29	0			
23					0	0	42	30	0			
24					0	3.3	40	30	0			
25					0	13	40	29	0			
26					0	15	38	27	0			
27					0	9.8	38	26	0			
28					12	0	37	28	0			
29		-----			17	9.2	38	48	0			
30		-----			20	23	38	44	0			
31		-----		-----	20	-----	38	42	-----		-----	
TOTAL					69	321.3	1,195	1,113	211.2			
MEAN					2.23	10.7	38.5	35.9	7.04			
MAX					20	23	44	48	42			
MIN					0	0	25	26	0			
AC-FT					137	637	2,370	2,210	419			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						0	30	40	29			
2						0	39	40	29			
3						0	43	40	29			
4						0	42	40	29			
5						0	34	40	21			
6						0	25	41	13			
7						0	26	41	13			
8						0	35	41	13			
9						0	34	41	12			
10						0	37	41	13			
11						0	38	40	13			
12						0	40	41	14			
13						0	41	27	14			
14						0	41	21	14			
15						16	40	35	14			
16						18	40	39	14			
17						19	38	39	15			
18						18	40	39	15			
19						19	38	30	15			
20						19	37	24	15			
21						18	38	25	16			
22						18	38	18	17			
23						18	41	17	17			
24						18	41	21	17			
25						18	40	22	17			
26						18	40	24	5.5			
27						16	40	25	0			
28						16	40	27	0			
29		-----				27	40	28	1.7			
30		-----				30	40	29	14			
31		-----		-----		-----	40	29	-----		-----	
TOTAL					0	306	1,176	1,005	449.2			
MEAN					0	10.2	37.9	32.4	15.0			
MAX					0	30	43	41	29			
MIN					0	0	25	17	0			
AC-FT					0	607	2,330	1,990	891			

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						0	13	0	27			
2						0	15	14	26			
3						0	16	13	19			
4						0	16	23	27			
5						0	16	29	24			
6						0	15	30	27			
7						11	15	29	26			
8						11	15	29	22			
9						0	15	29	18			
10						0	15	29	19			
11						0	17	30	19			
12						13	17	30	20			
13						15	17	25	20			
14						15	35	29	20			
15						15	43	29	22			
16						16	42	29	23			
17						17	42	28	23			
18						15	41	29	23			
19						13	41	29	23			
20						14	40	28	22			
21						16	41	28	22			
22						16	43	24	22			
23						15	43	26	22			
24						15	42	27	19			
25						15	42	27	16			
26						15	41	27	17			
27						15	39	27	5.5			
28						15	41	26	0			
29		-----				15	36	26	0			
30		-----				15	41	27	0			
31		-----		-----		-----	3.1	27	-----		-----	
TOTAL				0	0	307	898.1	807	573.5	0		
MEAN				0	0	10.2	29.0	26.0	19.1	0		
MAX				0	0	17	43	30	27	0		
MIN				0	0	0	3.1	0	0	0		
AC-FT				0	0	609	1,780	1,600	1,140	0		

## HYSHAM UPPER CANAL BELOW RELIFT PUMP

NUMBER

42KJ02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	28	18	42	36			
2					0	28	18	42	30			
3					0	27	18	42	30			
4					0	27	19	40	30			
5					0	29	27	42	30			
6					0	24	30	41	30			
7					0	0	38	39	31			
8					0	12	44	41	30			
9					0	17	44	37	29			
10					0	17	44	41	30			
11					0	11	43	41	30			
12					0	12	42	41	20			
13					0	18	29	41	12			
14					0	9.2	37	40	12			
15					0	0	43	41	12			
16					0	0	43	41	12			
17					0	0	42	41	12			
18					0	0	42	42	12			
19					0	0	42	39	12			
20					0	0	42	41	13			
21					0	0	42	41	13			
22					0	0	42	41	13			
23					0	0	40	41	13			
24					0	0	41	36	13			
25					0	0	40	22	11			
26					.07	0	42	42	0			
27					16	0	42	42	0			
28					17	0	42	41	0			
29					18	12	42	42	0			
30		-----			29	19	41	43	0			
31		-----		-----	29	-----	42	34	-----		-----	
TOTAL					109.07	290.2	1,161	1,240	516			
MEAN					3.52	9.67	37.5	40.0	17.2			
MAX					29	29	44	43	36			
MIN					0	0	18	22	0			
AC-FT					216	576	2,300	2,460	1,020			



42KJ 03000 Hysham Lower Canal below relift pump near Hysham, MT

LOCATION -- Lat.  $46^{\circ} 15' 09''$ , long  $107^{\circ} 19' 03''$ , in NW $\frac{1}{4}$  SW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 23, T. 6 N., R. 35 E., Treasure County, on right bank 0.1 mi. (0.2 km) downstream from relift check. 1.4 mi. (2.3 km) downstream from point of diversion which is at river mile 284.4 (457.6 km), 1.2 mi. (1.9 km) east of Myers, 5.0 mi (8.0 km) southwest of Hysham.

DRAINAGE AREA -- Above point of diversion - 37,684 sq. mi. (97,602 sq. km).

GAGE -- Water stage recorder. Altitude of gage, 2,700 ft. (823 m) from topography map.

AVERAGE DISCHARGE -- 1966 to 1976 - 12,290 AF/season (15.2 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 107 ft<sup>3</sup>/s (3.03 m<sup>3</sup>/s), August 17, 1972. Minimum discharge, no flow at times.

REMARKS -- Records good except for periods of extreme moss growth. Station replaces 42KJ 01000.

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1966

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	46	61	84	63			
2					0	49	47	84	63			
3					50	41	16	82	64			
4					50	22	0	81	64			
5					50	31	0	82	66			
6					50	31	17	82	21			
7					50	31	25	82	0			
8					50	31	45	81	0			
9					50	31	51	64	0			
10					50	30	53	53	37			
11					50	30	53	54	57			
12					51	30	54	56	57			
13					51	30	54	56	57			
14					53	30	54	56	58			
15					51	30	56	56	58			
16					53	31	56	56	58			
17					53	30	54	56	61			
18					53	43	51	56	46			
19					53	54	75	54	35			
20					53	54	70	56	33			
21					51	53	79	56	33			
22					53	54	82	56	32			
23					56	56	82	60	32			
24					56	34	82	64	35			
25					56	0	84	64	33			
26					56	29	84	64	32			
27					57	57	84	63	32			
28					50	56	84	64	31			
29		-----			46	66	84	64	31			
30		-----			46	73	88	64	10			
31		-----		-----	46	-----	84	63	-----		-----	
TOTAL					1,494	1,183	1,809	2,013	1,199			
MEAN					48.2	39.4	58.4	64.9	40.0			
MAX					57	73	88	84	66			
MIN					0	0	0	53	0			
AC-FT					2,960	2,350	3,590	3,990	2,380			

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1							0	88	50			
2							0	88	50			
3							0	87	50			
4							60	87	50			
5							60	75	51			
6							60	61	51			
7							60	53	54			
8							58	50	53			
9							27	67	53			
10							0	90	54			
11							0	88	53			
12							0	88	57			
13							4.8	88	43			
14							58	88	31			
15							67	75	31			
16							64	67	32			
17							69	90	32			
18							93	90	37			
19							93	88	46			
20							93	87	47			
21							93	87	45			
22							91	88	19			
23							90	87	0			
24							87	84	0			
25							85	84	0			
26							85	84	0			
27							85	82	0			
28							84	81	0			
29							88	81	0			
30		-----					88	63	0			
31		-----		-----		-----	88	50	-----		-----	
TOTAL							1,830.8	2,466	599			
MEAN							59.1	79.5	33.0			
MAX							93	90	57			
MIN							0	50	0			
AC-FT							3,630	4,890	1,960			

## HYSHAM LOWER CANAL BELCW RELIFT CHECK

NUMBER

42KJ03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1966

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0		0	56	51			
2					0		0	58	53			
3					0		0	58	75			
4					42		0	58	76			
5					0		0	58	76			
6					38		0	58	76			
7					49		0	58	76			
8					63		0	61	76			
9					70		0	78	73			
10					72		11	63	67			
11					73		50	58	64			
12					69		49	57	63			
13					69		61	56	63			
14					67		73	58	63			
15					50		76	58	58			
16					23		76	58	40			
17					0		90	58	40			
18					0		94	58	40			
19					0		94	58	40			
20					66		90	51	41			
21					63		90	45	37			
22					56		90	45	26			
23					36		90	37	21			
24					22		91	27	0			
25					0		93	22	0			
26					0		87	0	0			
27					0		66	41	0			
28					23		66	54	0			
29					32		61	54	0			
30		-----			24		60	54	0			
31		-----		-----	0	-----	57	53	-----		-----	
TOTAL					1,007	0	1,615	1,608	1,295			
MEAN					32.5	0	52.1	51.9	43.2			
MAX					73	0	94	78	76			
MIN					0	0	0	0	0			
AC-FT					2,000	0	3,200	3,190	2,570			

## HYSHAM LOWER CANAL BELCW RELIFT CHECK

NUMBER

42KJ03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1965

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	50	0	97	57			
2					0	15	0	95	55			
3					0	21	0	99	55			
4					0	21	0	99	55			
5					0	49	0	99	57			
6					0	62	0	99	57			
7					0	60	0	101	57			
8					0	64	0	101	57			
9					0	48	0	101	57			
10					0	35	0	101	57			
11					0	35	0	99	55			
12					0	32	0	99	55			
13					0	32	0	99	55			
14					0	30	14	97	55			
15					0	32	0	97	37			
16					0	30	29	95	25			
17					0	30	30	95	25			
18					0	28	49	99	25			
19					45	28	59	95	25			
20					27	28	55	95	23			
21					27	28	61	93	21			
22					27	28	61	93	21			
23					27	49	61	93	25			
24					27	63	83	95	21			
25					27	55	93	97	21			
26					27	11	93	57	21			
27					27	0	93	71	21			
28					27	0	97	57	21			
29		-----			50	0	99	57	17			
30		-----			55	0	99	57	0			
31		-----		-----	55	-----	97	57	-----		-----	
TOTAL					448	964	1,173	2,829	1,133			
MEAN					14.5	32.1	37.8	91.3	37.8			
MAX					55	64	99	101	57			
MIN					0	0	0	57	0			
AC-FT					889	1,910	2,330	5,610	2,250			

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OFC
1						0	51	97	53			
2						0	83	95	67			
3						0	97	77	67			
4						0	97	71	67			
5						0	95	55	61			
6						0	93	57	53			
7						0	91	57	49			
8						0	91	83	49			
9						0	93	97	49			
10						30	93	95	49			
11						37	93	97	53			
12						26	91	97	53			
13						0	91	95	49			
14						0	63	93	46			
15						0	8.5	93	30			
16						0	4.0	95	21			
17						25	44	95	20			
18						37	97	95	27			
19						37	97	95	39			
20						37	97	95	19			
21						37	97	97	0			
22						37	95	71	0			
23						37	95	53	0			
24						37	95	51	0			
25						37	93	51	0			
26						51	95	53	0			
27						53	97	53	0			
28						53	99	55	0			
29		-----				51	99	55	0			
30		-----				51	97	37	0			
31		-----		-----		-----	93	32	-----		-----	
TOTAL						673	2,624.5	2,342	921			
MEAN						22.4	84.7	75.5	30.7			
MAX						53	99	97	67			
MIN						0	4.0	32	0			
AC-FT						1,330	5,210	4,650	1,830			

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						0	90	49				
2						0	92	74				
3						0	92	86				
4						0	96	84				
5						0	96	88				
6						0	92	90				
7						0	94	90				
8						0	92	90				
9						0	94	88				
10						0	94	88				
11						0	92	90				
12						0	92	90				
13						0	92	92				
14						0	92	90				
15						0	92	88				
16						0	90	90				
17						0	90	88				
18						0	90	51				
19						0	92	48				
20						0	92	74				
21						32	90	90				
22						34	90	92				
23						34	92	92				
24						25	64	94				
25						51	48	94				
26						68	49	94				
27						66	51	68				
28						88	51	51				
29		-----				96	51	51				
30		-----				92	51	41				
31		-----		-----		-----	51	0	-----		-----	
TOTAL						586	2,534	2,375	0			
MEAN						19.5	81.7	76.6	0			
MAX						96	96	94	0			
MIN						0	48	0	0			
AC-FT						1,160	5,020	4,710	0			

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	28	91	91	61			
2					0	35	89	91	63			
3					0	32	87	93	44			
4					0	32	62	93	30			
5					0	32	49	93	34			
6					0	30	51	67	35			
7					0	32	49	49	35			
8					0	32	77	49	35			
9					0	34	89	49	35			
10					0	35	93	49	35			
11					0	34	89	49	35			
12					0	32	91	77	25			
13					0	28	89	95	18			
14					0	28	91	57	18			
15					0	30	87	61	16			
16					0	30	87	91	18			
17					24	37	93	107	18			
18					37	53	75	105	18			
19					20	53	49	63	16			
20					0	55	51	57	15			
21					0	55	6.4	55	15			
22					0	53	0	59	20			
23					2.3	55	0	61	27			
24					23	57	37	61	26			
25					32	83	51	61	0			
26					32	95	61	63	0			
27					32	85	49	63	0			
28					30	83	63	61	0			
29					30	83	55	61	0			
30		-----			30	89	77	61	0			
31		-----		-----	28	-----	91	61	-----		-----	
TOTAL					320.3	1,440	2,029.4	2,153	692			
MEAN					10.3	48.0	65.5	69.5	23.1			
MAX					37	95	93	107	63			
MIN					0	26	0	49	0			
AC-FT					635	2,860	4,030	4,270	1,370			

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	18	63	87	61			
2					0	20	63	87	40			
3					0	8.9	61	87	0			
4					0	0	59	87	0			
5					0	0	77	87	0			
6					0	0	87	87	29			
7					0	14	91	87	34			
8					0	20	91	87	34			
9					0	21	71	89	32			
10					0	25	91	89	32			
11					0	25	89	89	32			
12					0	27	89	89	30			
13					0	25	87	89	30			
14					0	23	87	87	19			
15					0	25	89	87	0			
16					0	25	89	87	0			
17					0	27	87	87	0			
18					0	23	87	67	0			
19					0	0	87	59	0			
20					0	0	87	59	0			
21					0	0	87	59	0			
22					0	0	89	59	0			
23					0	0	89	59	0			
24					33	13	89	59	0			
25					44	25	89	57	0			
26					17	25	89	59	0			
27					0	17	89	59	0			
28					8.1	0	89	51	0			
29		-----			16	18	89	48	0			
30		-----			18	42	89	59	0			
31		-----		-----	18	-----	87	59	-----		-----	
TOTAL					154.1	466.9	2,607	2,302	373			
MEAN					4.97	15.6	84.1	74.3	12.4			
MAX					44	42	91	89	61			
MIN					0	0	59	48	0			
AC-FT					306	926	5,170	4,570	740			

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						0	69	85	61			
2						0	93	87	61			
3						0	103	87	61			
4						0	103	89	61			
5						0	85	89	42			
6						0	67	89	27			
7						0	63	91	27			
8						0	89	89	27			
9						0	91	87	27			
10						0	101	87	27			
11						43	97	85	28			
12						57	93	85	28			
13						57	91	57	28			
14						49	87	30	28			
15						40	89	81	28			
16						40	45	87	28			
17						37	83	85	28			
18						37	83	85	28			
19						35	85	71	28			
20						33	87	61	28			
21						33	83	61	28			
22						32	83	41	28			
23						30	81	18	27			
24						28	83	15	27			
25						28	85	15	27			
26						27	83	13	7.7			
27						30	83	11	0			
28						30	85	46	0			
29		-----				59	85	59	3.1			
30		-----				69	85	59	27			
31		-----		-----		-----	83	61	-----		-----	
TOTAL					0	794	2,623	2,006	875.8			
MEAN					0	26.5	84.6	64.7	29.2			
MAX					0	69	103	91	61			
MIN					0	0	45	11	0			
AC-FT					0	1,570	5,200	3,980	1,740			

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJ03000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						0	34	0	57			
2						0	32	40	61			
3						0	32	65	40			
4						39	32	53	61			
5						41	32	46	61			
6						44	32	77	61			
7						35	34	93	61			
8						34	57	97	65			
9						0	81	97	49			
10						50	81	95	32			
11						0	79	97	16			
12						27	77	97	16			
13						30	79	97	16			
14						32	91	90	16			
15						32	93	101	51			
16						32	93	83	53			
17						27	93	51	53			
18						32	93	51	48			
19						34	93	51	46			
20						32	95	51	32			
21						32	93	51	12			
22						30	89	42	10			
23						30	87	53	8.5			
24						30	87	57	15			
25						32	85	57	16			
26						34	83	55	18			
27						34	77	57	6.4			
28						32	81	57	0			
29		-----				32	73	57	0			
30		-----				32	77	57	0			
31		-----		-----		-----	12	99	-----		-----	
TOTAL					0	789.50	2,177	2,943	991.9	0		
MEAN					0	26.3	70.2	65.9	33.1	0		
MAX					0	44	95	101	65	0		
MIN					0	0	12	0	0	0		
AC-FT					0	1,570	4,320	4,050	1,670	0		

## HYSHAM LOWER CANAL BELOW RELIFT CHECK

NUMBER

42KJC000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	73	25	75	77			
2					0	71	59	73	65			
3					0	67	71	75	75			
4					0	67	71	71	49			
5					0	65	95	77	53			
6					0	55	100	77	53			
7					0	0	83	69	53			
8					0	22	63	73	57			
9					0	27	80	77	55			
10					0	27	80	77	55			
11					0	27	80	75	57			
12					0	25	83	75	41			
13					0	18	73	73	30			
14					0	9.4	69	73	30			
15					0	0	78	73	32			
16					0	0	75	73	32			
17					0	0	69	73	32			
18					0	5.1	77	73	32			
19					0	0	77	71	32			
20					0	0	75	73	32			
21					0	0	73	75	32			
22					0	0	73	75	32			
23					0	0	55	75	32			
24					13	0	73	75	32			
25					55	0	79	39	24			
26					55	0	71	75	0			
27					44	0	73	75	0			
28					37	8.6	73	73	0			
29					63	27	69	75	0			
30		-----			77	23	75	73	0			
31		-----		-----	75	-----	75	83	-----		-----	
TOTAL					419	617.1	2,292	2,269	1,124			
MEAN					13.5	20.6	73.5	73.2	37.5			
MAX					77	73	100	83	95			
MIN					0	0	25	39	0			
AC-F					831	1,220	4,550	4,500	2,230			





43B 00050 Soda Butte Creek at Cooke City, MT

LOCATION -- Lat.  $45^{\circ} 01' 18''$ , long.  $109^{\circ} 55' 33''$ , in  $SE\frac{1}{4}$   $SW\frac{1}{4}$ ,  $NE\frac{1}{4}$  Sec. 25, T. 9 S., R. 14 E., Park County, on the right bank about 200 ft. (61 m) below Miller Creek,  $\frac{1}{4}$  mile (400 m) east of Cooke City, Montana.

DRAINAGE AREA -- 5.88 sq. mi. (15.2 sq. km.)

GAGE -- Water stage recorder on a four foot (1.22 m) cipolletti weir. Datum of gage is 8470.82 ft. (2581.91 m).

AVERAGE DISCHARGE - 1975 through 1976 - 6,140 AF/year (7.57 cu. hm/year).

EXTREMES -- Period of record: Maximum discharge,  $94 \text{ ft}^3/\text{s}$  ( $2.67 \text{ m}^3/\text{s}$ ), July 2, 1975. Minimum discharge,  $0.11 \text{ ft}^3/\text{s}$  ( $0.003 \text{ m}^3/\text{s}$ ) January, February, March and April 1975.

REMARKS -- Record began in September 1974. Record is good except for periods of winter freeze-up.

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 SODA BUTTE CREEK AT COOKE CITY, MT NUMBER---43B 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1974

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OFC
1									.052	.032	.023	.008
2									.052	.032	.015	.008
3									.052	.032	.015	.008
4									.052	.032	.015	.008
5									.052	.032	.015	.008
6									.052	.032	.015	.008
7									.042	.032	.015	.008
8									.042	.032	.015	.008
9									.042	.032	.015	.008
10									.042	.023	.015	.008
11									.042	.032	.015	.008
12									.042	.032	.015	.008
13									.042	.023	.015	.008
14									.042	.023	.008	.008
15									.042	.023	.015	.008
16									.042	.023	.015	.008
17									.042	.023	.015	.008
18									.042	.023	.008	.003
19									.042	.023	.008	.003
20									.042	.023	.008	.003
21									.042	.023	.008	.003
22									.042	.023	.008	.003
23									.042	.023	.008	.003
24									.042	.023	.008	.003
25									.032	.023	.008	.003
26									.032	.023	.008	.003
27									.032	.023	.008	.003
28									.032	.023	.008	.003
29									.032	.023	.008	.003
30									.032	.023	.008	.003
31									.032	.023	.008	.003
TOTAL									1.260	.803	.260	.178
MEAN									.042	.026	.012	.006
MAX									.052	.032	.015	.008
MIN									.032	.023	.008	.003
									10000M	69400M	31100M	15400M
M = CUBIC METERS												
H = CUBIC HECTOMETERS												
K = CUBIC KILOMETERS												

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 SODA BUTTE CREEK AT COOKE CITY, MT NUMBER---43B 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OFC
1	.003	.003	.003	.003	.003	.25	2.26	.34	.069	.033	.026	.013
2	.003	.003	.003	.003	.003	.40	2.67	.31	.099	.032	.025	.013
3	.003	.003	.003	.003	.003	.56	2.88	.28	.056	.032	.024	.013
4	.003	.003	.003	.003	.003	.51	2.49	.27	.093	.033	.024	.012
5	.003	.003	.003	.003	.003	.64	2.41	.26	.079	.035	.023	.012
6	.003	.003	.003	.003	.003	.94	2.32	.26	.065	.035	.022	.012
7	.003	.003	.003	.003	.003	.97	2.34	.25	.051	.035	.022	.012
8	.003	.003	.003	.003	.003	.88	2.15	.24	.051	.036	.021	.012
9	.003	.003	.003	.003	.003	.64	2.07	.23	.045	.035	.021	.012
10	.003	.003	.003	.003	.032	.59	1.98	.22	.045	.035	.020	.012
11	.003	.003	.003	.003	.023	.64	1.87	.21	.045	.036	.020	.012
12	.003	.003	.003	.003	.011	.83	1.76	.20	.042	.036	.019	.012
13	.003	.003	.003	.003	.003	1.03	1.70	.19	.042	.038	.018	.012
14	.003	.003	.003	.003	.008	1.16	1.57	.18	.042	.036	.018	.012
15	.003	.003	.003	.003	.011	1.09	1.47	.17	.042	.036	.018	.012
16	.003	.003	.003	.003	.023	1.03	1.36	.16	.042	.035	.018	.012
17	.003	.003	.003	.003	.032	1.12	1.25	.15	.040	.035	.017	.012
18	.003	.003	.003	.003	.064	.94	1.13	.14	.040	.035	.017	.012
19	.003	.003	.003	.003	.10	.88	1.02	.13	.040	.035	.017	.012
20	.003	.003	.003	.003	.10	1.00	.91	.13	.040	.038	.016	.012
21	.003	.003	.003	.003	.077	1.16	.79	.13	.040	.038	.016	.012
22	.003	.003	.003	.003	.064	1.16	.74	.12	.037	.038	.016	.012
23	.003	.003	.003	.003	.052	1.25	.71	.12	.037	.035	.016	.012
24	.003	.003	.003	.003	.052	1.49	.65	.12	.037	.032	.015	.012
25	.003	.003	.003	.003	.052	1.59	.62	.11	.037	.031	.015	.012
26	.003	.003	.003	.003	.052	1.25	.57	.11	.037	.030	.015	.012
27	.003	.003	.003	.003	.064	1.12	.54	.11	.034	.029	.014	.012
28	.003	.003	.003	.003	.064	1.25	.48	.11	.034	.028	.014	.012
29	.003	.003	.003	.003	.090	1.55	.45	.11	.024	.028	.014	.012
30	.003	.003	.003	.003	.15	1.88	.40	.11	.033	.027	.014	.012
31	.003	.003	.003	.003	.20	.37	.37	.10	.026	.026	.014	.012
TOTAL	.003	.084	.093	.090	1.402	29.80	43.53	5.57	1.498	1.041	.655	.375
MEAN	.003	.003	.003	.003	.0452	.993	1.404	.180	.0466	.0336	.0185	.0121
MAX	.003	.003	.003	.003	.200	1.88	2.67	.34	.099	.038	.024	.013
MIN	.003	.003	.003	.003	.003	1.03	1.57	.18	.040	.036	.018	.012
	3040M	7260M	8340M	7780M	121000M	2.57H	3.67H	481000M	129000M	80500M	48000M	32400M
M = CUBIC METERS												
H = CUBIC HECTOMETERS												
K = CUBIC KILOMETERS												

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 SODA BUTTE CREEK AT COCKE CITY, MT NUMBER ---438 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.013	.011	.008	.005	.007	1.25	1.80	.24	.080	.053	.030	.014
2	.013	.011	.008	.005	.012	1.35	1.45	.24	.060	.052	.025	.014
3	.013	.011	.008	.005	.024	1.35	1.30	.23	.070	.052	.028	.014
4	.013	.011	.008	.005	.034	1.65	1.25	.23	.070	.052	.027	.014
5	.013	.011	.008	.006	.034	1.85	1.25	.21	.070	.051	.027	.014
6	.013	.011	.008	.006	.034	2.05	1.25	.21	.060	.051	.026	.014
7	.013	.010	.008	.006	.042	1.85	1.15	.20	.060	.051	.026	.014
8	.013	.010	.008	.006	.050	1.95	1.10	.20	.060	.050	.025	.014
9	.013	.010	.008	.006	.070	2.20	1.05	.20	.060	.050	.025	.013
10	.013	.010	.007	.006	.084	1.85	.96	.20	.060	.050	.024	.013
11	.013	.010	.007	.006	.15	1.75	.90	.18	.060	.048	.024	.013
12	.013	.010	.007	.006	.14	1.55	.78	.18	.060	.048	.023	.013
13	.013	.010	.007	.006	.17	1.40	.72	.18	.060	.048	.023	.013
14	.013	.010	.007	.006	.24	1.10	.60	.15	.060	.047	.022	.013
15	.013	.009	.007	.006	.27	1.05	.55	.15	.060	.046	.022	.013
16	.013	.009	.007	.006	.27	1.05	.55	.15	.060	.045	.020	.013
17	.013	.009	.006	.006	.40	.96	.55	.15	.060	.044	.020	.012
18	.013	.009	.006	.007	.63	.96	.55	.15	.060	.043	.019	.012
19	.013	.009	.006	.007	.80	.96	.50	.15	.060	.042	.019	.012
20	.013	.009	.006	.007	.98	1.10	.45	.13	.060	.041	.018	.012
21	.013	.008	.006	.007	1.10	1.25	.40	.13	.060	.040	.018	.012
22	.012	.008	.006	.007	1.15	1.30	.35	.090	.060	.040	.017	.012
23	.012	.008	.005	.007	1.03	1.15	.35	.090	.060	.039	.016	.012
24	.012	.008	.005	.007	1.03	1.10	.31	.060	.060	.038	.016	.012
25	.012	.008	.005	.007	1.10	.96	.27	.090	.059	.037	.016	.012
26	.012	.008	.005	.007	.98	.90	.27	.090	.058	.036	.015	.012
27	.012	.008	.005	.007	1.15	.84	.26	.090	.057	.035	.015	.012
28	.012	.008	.005	.007	1.48	1.05	.24	.090	.056	.034	.015	.012
29	.012	.008	.005	.007	1.55	1.15	.24	.090	.055	.033	.015	.012
30	.012	.008	.005	.007	1.52	1.45	.26	.080	.054	.032	.015	.012
31	.011	.008	.005	.007	1.35		.24	.080		.031		.012
TOTAL	.392	.272	.202	.189	17.911	40.98	21.90	4.74	1.849	1.356	.635	.366
MEAN	.013	.009	.007	.006	.578	1.363	.706	.153	.062	.044	.021	.013
MAX	.013	.011	.008	.007	1.55	2.20	1.80	.24	.080	.053	.030	.014
MIN	.011	.008	.005	.005	.007	.84	.24	.080	.054	.031	.015	.012
	33900M	23500M	17500M	16300M	1.55H	3.53H	1.89H	410000M	160000M	117000M	54900M	34200M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
 K = CUBIC KILOMETERS



43B 00070 Soda Butte Creek at Silvergate, MT

LOCATION -- Lat.  $45^{\circ} 00' 25''$ , Long.  $109^{\circ} 59' 17''$ , in SE $\frac{1}{4}$  SW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 33, T. 93., R. 14 E., Park County, on right bank, 30 ft. (9m) downstream from county bridge, which is at river mile 18.8 upstream from mouth, at Silvergate, MT.

DRAINAGE AREA -- 27 sq. mi. (70 sq. km)

GAGE -- Water stage recorder. Altitude of gage 7,390 ft. (2,252 m) from topography map.

AVERAGE DISCHARGE -- 1976 - 67,800 AF/year (83.6 cu. hm/year).

EXTREMES -- Period of record: Maximum discharge, 900 ft.<sup>3</sup>/s (25.5 m<sup>3</sup>/s), July 1, 1976. Minimum discharge, 1.09 ft.<sup>3</sup>/s (0.031 m<sup>3</sup>/s), March 30, 1976.

REMARKS -- Records good except during times of winter freeze-up.

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 SODA BUTTE CREEK AT SILVERGATE, MT NUMBER---438 00070  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1									.70	.31	.34	.17
2									.70	.31	.26	.16
3									.68	.31	.27	.16
4									.68	.31	.27	.16
5									.68	.28	.26	.14
6									.68	.28	.26	.14
7									.68	.28	.26	.14
8									.64	.31	.25	.13
9									.64	.31	.25	.13
10									.60	.28	.25	.13
11									.56	.28	.24	.12
12									.52	.31	.24	.12
13									.48	.31	.24	.12
14									.44	.31	.22	.12
15									.40	.28	.22	.12
16									.36	.31	.22	.12
17									.32	.31	.21	.12
18									.28	.31	.21	.11
19									.28	.31	.21	.11
20									.28	.31	.20	.11
21									.28	.37	.20	.11
22									.28	.40	.20	.11
23									.28	.34	.19	.11
24									.28	.34	.19	.11
25									.28	.34	.19	.11
26									.28	.37	.18	.11
27									.28	.34	.18	.11
28									.31	.31	.18	.11
29									.31	.31	.17	.10
30									.31	.31	.17	.10
31									.31	.31	.17	.09
TOTAL									13.40	9.76	6.76	5.79
MEAN									.450	.315	.22	.123
MAX									.70	.40	.34	.17
MIN									.28	.28	.17	.09
									1.17H	843000M	586000M	328000M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
 K = CUBIC KILOMETERS

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 SODA BUTTE CREEK AT SILVERGATE, MT NUMBER---438 00070  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.399	.308	.047	.032	.17	9.06	25.5	3.12	.57	.51	.34	.23
2	.399	.308	.046	.033	.22	12.5	19.8	2.82	.51	.54	.31	.22
3	.399	.308	.046	.034	.28	16.4	18.1	2.58	.51	.55	.31	.21
4	.399	.308	.045	.035	.31	18.4	18.1	2.27	.48	.54	.31	.20
5	.399	.308	.045	.035	.31	18.4	19.0	2.12	.48	.51	.34	.19
6	.391	.305	.044	.036	.34	21.2	18.1	2.12	.57	.48	.31	.18
7	.391	.305	.044	.036	.40	21.2	18.1	2.04	.57	.48	.31	.17
8	.393	.306	.043	.037	.48	22.1	15.9	1.98	.51	.51	.31	.16
9	.398	.306	.043	.038	.50	21.2	15.3	1.98	.51	.48	.31	.16
10	.395	.306	.042	.039	.71	21.2	14.7	1.98	.51	.48	.31	.15
11	.385	.302	.042	.040	.68	19.8	12.7	1.64	.51	.48	.27	.15
12	.382	.302	.041	.041	1.08	16.4	11.9	1.70	.71	.45	.22	.14
13	.382	.305	.041	.042	1.15	15.5	10.2	1.70	.50	.42	.22	.14
14	.382	.305	.040	.043	1.42	10.8	5.66	1.47	.54	.42	.22	.13
15	.379	.307	.040	.044	1.70	10.2	7.79	1.30	.54	.40	.20	.13
16	.379	.307	.039	.045	2.12	10.2	7.65	1.08	.51	.40	.27	.12
17	.379	.307	.039	.046	2.35	8.21	7.09	.91	.51	.40	.27	.11
18	.379	.307	.039	.047	3.20	8.21	7.79	.91	.51	.40	.27	.10
19	.376	.304	.038	.048	4.39	9.06	6.23	.88	1.08	.57	.27	.09
20	.376	.304	.037	.049	4.39	11.9	5.38	.76	.65	.40	.22	.09
21	.376	.303	.036	.050	5.66	16.1	5.38	.76	.65	.40	.20	.085
22	.376	.303	.036	.051	6.80	18.7	5.10	.71	.65	.40	.20	.085
23	.374	.303	.035	.052	6.80	15.9	4.53	.71	.88	.37	.25	.085
24	.374	.303	.035	.052	7.08	12.5	4.53	.71	.71	.37	.24	.085
25	.374	.303	.034	.054	7.65	10.8	3.56	.68	.71	.37	.24	.085
26	.374	.303	.034	.055	6.80	9.63	3.68	.68	.59	.37	.24	.085
27	.371	.303	.033	.056	7.65	9.63	3.54	.62	.57	.34	.25	.085
28	.371	.303	.033	.057	8.21	8.21	3.12	.50	.57	.37	.24	.085
29	.371	.303	.032	.058	11.5	15.3	2.97	.59	.54	.40	.24	.085
30	.371	.303	.031	.11	12.5	21.2	3.12	.59	.54	.34	.23	.080
31	.363	.302	.032		6.91		2.97	.57		.27		.080
TOTAL	2.919	1.559	1.211	1.356	117.84	444.90	311.28	42.78	18.34	13.39	9.82	5.65
MEAN	.391	.307	.039	.047	2.801	14.83	10.04	1.380	.611	.432	.227	.129
MAX	.399	.308	.047	.11	12.5	22.1	25.5	3.12	1.08	.65	.34	.23
MIN	.368	.304	.031	.032	6.91	8.21	2.97	.57	1.08	.34	.21	.080
	216000M	145000M	100000M	121000M	10.2H	38.4H	26.9H	3.70H	1.58H	1.16H	840000M	345000M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
 K = CUBIC KILOMETERS



43B 02000 Park Branch Canal below headgate near Emigrant, MT

LOCATION -- Lat.  $45^{\circ} 20' 58''$ , long  $110^{\circ} 44' 37''$ , in SE $\frac{1}{4}$  SE $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 4, T. 6 S., R. 8 E., Park County on left bank, 0.2 mi. (0.3 km) downstream from point of diversion, 0.8 mi. (1.3 km) downstream from Fridley Creek, 5.6 mi. (9.0 km) upstream from Eightmile Creek, 1.7 mi. (2.7 km) south of Emigrant, point of diversion at river mile 527.0 (847.9 km).

DRAINAGE AREA -- Above point of diversion - 3,057 sq. mi. (7,918 sq. km).

GAGE -- Water stage recorder. Altitude of gage 4,870 ft. (1,484 m) from topography map.

AVERAGE DISCHARGE -- 1965 to 1976 - 66,340 AF/season (81.8 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 360 ft.<sup>3</sup>/s (10.2 m<sup>3</sup>/s), August 1968. Minimum discharge, no flow at times.

REMARKS -- Records good except for periods of extreme moss growth.

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

438 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1965

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						247	270	247	276			
2						247	270	138	307			
3						253	264	187	338			
4						264	258	264	338			
5						253	258	276	338			
6						258	253	276	338			
7						270	253	270	338			
8						276	253	282	338			
9						288	253	307	338			
10						294	242	300	332			
11						300	229	300	313			
12						282	224	300	300			
13						288	224	300	294			
14						276	229	300	300			
15						276	235	294	282			
16						282	235	294	258			
17						276	242	288	253			
18						276	247	282	247			
19						282	253	282	247			
20						288	253	282	247			
21						294	258	282	247			
22						294	264	282	242			
23						300	258	288	235			
24						300	253	282	235			
25						288	247	282	235			
26						282	253	282	229			
27						288	264	276	229			
28						276	264	270	229			
29		-----				270	264	264	224			
30		-----				264	264	264	224			
31		-----		-----		-----	258	258	-----			
TOTAL						8,332	7,792	8,499	8,351			
MEAN						278	251	274	278			
MAX						300	270	307	338			
MIN						247	224	138	224			
AC-FT						16,530	15,460	16,860	16,560			

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

438 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1966

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						276	294	319	276			
2						282	294	313	288			
3						282	294	307	307			
4						288	294	307	307			
5						288	294	307	307			
6						294	294	300	307			
7						294	300	300	300			
8						294	300	294	300			
9						294	294	294	294			
10						300	294	294	288			
11						307	300	288	288			
12						294	300	288	282			
13						294	300	282	282			
14						294	300	276	294			
15						300	294	276	307			
16						300	294	270	300			
17						307	294	288	288			
18						307	294	313	294			
19						307	294	313	294			
20						300	294	313	288			
21						300	294	313	288			
22						307	294	307	282			
23						300	294	307	282			
24						294	288	300	282			
25						294	288	300	282			
26						294	288	294	270			
27						300	258	294	258			
28						300	171	288	258			
29		-----				294	270	282	253			
30		-----				294	288	282	253			
31		-----		-----		-----	307	276	-----			
TOTAL						8,879	8,956	9,185	8,599			
MEAN						296	289	296	287			
MAX						307	307	319	307			
MIN						276	171	270	253			
AC-FT						17,610	17,760	18,220	17,060			

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

42B 02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						269	253	297	297			
2						269	237	297	287			
3						269	229	287	287			
4						278	229	287	297			
5						278	237	287	297			
6						278	237	287	297			
7						269	237	287	297			
8						261	237	278	297			
9						278	237	278	297			
10						278	237	269	307			
11						278	229	269	297			
12						278	229	261	297			
13						278	229	253	287			
14						287	229	215	278			
15						278	237	142	278			
16						287	222	261	278			
17						297	229	297	278			
18						297	261	297	278			
19						297	278	297	278			
20						297	269	297	269			
21						287	269	287	269			
22						278	269	287	261			
23						261	261	297	261			
24						253	261	297	245			
25						253	261	297	237			
26						253	287	297	229			
27						269	287	287	222			
28						269	287	297	215			
29		-----				261	287	297	208			
30		-----				269	257	297	208			
31		-----		-----		-----	297	297	-----		-----	
TOTAL						8,254	7,845	8,680	8,133			
MEAN						275	253	290	271			
MAX						297	297	297	307			
MIN						253	222	142	208			
AC-FT						16,370	15,560	17,220	16,130			

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

43B 02000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	231	257	293	293			
2					0	231	257	312	284			
3					0	231	266	331	284			
4					0	240	275	331	284			
5					0	222	275	340	284			
6					0	231	284	331	284			
7					0	266	284	331	277			
8					0	266	293	293	277			
9					27	275	303	170	277			
10					70	266	303	248	277			
11					118	257	303	340	277			
12					128	266	284	340	266			
13					133	275	284	350	266			
14					144	248	284	360	266			
15					144	240	293	360	266			
16					144	231	284	360	266			
17					144	240	293	360	266			
18					150	257	303	360	266			
19					156	275	303	340	277			
20					163	248	303	340	266			
21					170	240	312	340	266			
22					184	248	303	331	257			
23					184	248	303	321	257			
24					170	240	303	321	257			
25					170	240	303	312	257			
26					163	248	303	303	257			
27					163	266	303	303	248			
28					163	284	303	303	257			
29					191	275	312	303	248			
30		-----			206	266	303	293	248			
31		-----		-----	231	-----	293	293	-----		-----	
TOTAL					3,516	7,551	9,072	9,913	8,055			
MEAN					113	252	293	320	269			
MAX					231	284	312	360	293			
MIN					0	222	257	170	248			
AC-FT					6,970	14,980	17,990	19,660	15,980			

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

438 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						254	224	302	266	218		
2						254	230	309	260	224		
3						254	230	309	254	200		
4						260	230	278	248	200		
5						266	230	200	242	200		
6						272	230	278	236	200		
7						272	236	302	230	200		
8						176	236	302	218	200		
9						266	230	309	212	200		
10						266	224	324	212	200		
11						266	224	324	212	154		
12						266	224	290	212	188		
13						260	224	150	212	176		
14						254	224	290	206	176		
15						254	236	290	218	188		
16						254	236	290	230	188		
17						260	230	290	224	113		
18						254	230	296	218	0		
19						254	230	290	224	0		
20						266	236	290	248	0		
21						260	230	290	272	0		
22						260	224	290	260	0		
23						260	248	290	248	0		
24						266	260	278	230	0		
25						248	260	266	230	0		
26						242	272	284	224	0		
27						236	266	296	218	0		
28						242	266	284	212	0		
29		-----				236	278	278	212	0		
30		-----				236	290	272	206	0		
31		-----		-----		-----	296	266	-----	0	-----	
TOTAL						7,614	7,484	8,807	6,894	3,265		
MEAN						254	241	284	230	105		
MAX						272	296	324	272	224		
MIN						176	224	150	206	0		
AC-FT						15,100	14,840	17,470	13,670	6,480		

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

438 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						75	230	248	284			
2						130	230	248	284			
3						182	230	254	272			
4						200	242	254	266			
5						206	248	272	266			
6						212	248	278	278			
7						212	254	278	266			
8						212	248	276	272			
9						194	242	278	272			
10						206	248	278	260			
11						206	242	290	254			
12						206	248	290	248			
13						200	236	290	248			
14						200	242	284	248			
15						200	242	284	248			
16						200	236	284	248			
17						206	230	284	248			
18						212	230	278	248			
19						218	224	278	248			
20						230	248	272	254			
21						242	260	272	254			
22						248	260	272	248			
23						254	260	278	242			
24						254	266	284	242			
25						254	260	278	230			
26						248	260	272	230			
27						248	254	272	230			
28						254	254	272	230			
29		-----				254	254	266	230			
30		-----				242	248	266	224			
31		-----		-----		-----	248	272	-----		-----	
TOTAL						6,405	7,622	8,504	7,572			
MEAN						214	246	274	252			
MAX						254	266	290	284			
MIN						75	224	248	224			
AC-FT						12,700	15,120	16,870	15,070			

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

43B G2000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	176	230	248	266	182		
2					0	176	236	248	266	176		
3					0	182	230	254	272	176		
4					0	200	224	254	272	176		
5					0	206	224	266	266	182		
6					0	218	224	266	266	188		
7					0	230	224	260	260	182		
8					0	254	224	260	260	182		
9					0	254	218	260	260	170		
10					0	254	230	260	260	165		
11					0	272	236	260	254	165		
12					0	266	230	272	242	160		
13					0	266	224	272	236	155		
14					0	272	224	272	236	160		
15					0	272	230	272	224	165		
16					0	272	224	272	212	155		
17					0	272	218	272	206	150		
18					22	278	218	266	206	155		
19					75	272	212	266	200	110		
20					106	266	206	260	200	79		
21					106	272	212	260	200	31		
22					110	284	218	254	194	0		
23					110	272	224	242	188	0		
24					120	284	218	248	182	0		
25					135	254	218	260	182	0		
26					155	248	212	248	182	0		
27					170	248	230	236	182	0		
28					194	242	242	230	176	0		
29					194	230	254	200	170	0		
30		-----			188	224	254	272	176	0		
31		-----		-----	188	-----	254	266	-----	0	-----	
TOTAL					1,873	7,416	7,022	7,976	6,696	3,264		
MEAN					60.4	247	227	257	223	105		
MAX					194	284	254	272	272	188		
MIN					0	176	206	200	170	0		
AC-FT					3,720	14,710	13,930	15,820	13,280	6,470		

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

43B G2000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				0	12	292	277	299	284			
2				0	9.5	269	277	292	277			
3				0	9.5	277	269	284	269			
4				0	12	277	262	284	255			
5				0	15	284	269	292	248			
6				0	12	269	269	292	292			
7				0	9.5	269	269	292	292			
8				0	9.5	284	269	292	292			
9				0	7.0	292	262	299	277			
10				0	7.0	277	262	248	284			
11				0	34	248	262	157	277			
12				0	67	262	262	284	241			
13				0	67	262	255	299	241			
14				0	76	277	262	299	255			
15				0	95	277	255	307	255			
16				0	115	277	277	299	248			
17				0	209	277	269	292	241			
18				0	215	277	262	284	228			
19				0	222	262	262	284	228			
20				0	222	262	262	284	248			
21				0	228	269	269	284	235			
22				0	222	269	262	277	215			
23				0	228	277	262	284	215			
24				2.0	241	277	262	292	209			
25				7.0	248	269	255	277	209			
26				7.0	248	269	262	277	202			
27				7.0	255	269	262	292	215			
28				12	277	269	262	292	262			
29				18	284	277	262	284	215			
30		-----		15	299	277	248	299	202			
31		-----		-----	307	-----	277	299	-----		-----	
TOTAL				68.0	4,262.0	8,193	8,196	8,820	7,411			
MEAN				2.27	137	273	264	285	247			
MAX				18	307	292	277	307	292			
MIN				0	7.0	248	248	157	202			
AC-FT				135	8,450	16,250	16,260	17,490	14,700			

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

43E 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	262	277	277	196	30		
2					0	262	284	284	196	28		
3					0	255	284	284	176	28		
4					0	255	277	284	170	10		
5					0	262	277	284	157	0		
6					0	269	269	277	151	0		
7					0	277	262	277	151	0		
8					0	277	262	277	151	0		
9					0	269	262	269	170	0		
10					0	269	255	262	151	0		
11					0	255	255	262	145	0		
12					0	255	255	262	145	0		
13					0	255	248	248	133	0		
14					0	255	255	235	133	0		
15					0	255	262	222	170	0		
16					3.0	241	262	209	170	0		
17					8.0	248	262	196	157	0		
18					23	241	262	215	139	0		
19					61	241	269	241	133	0		
20					90	255	269	228	133	0		
21					95	262	269	228	145	0		
22					95	277	277	222	139	0		
23					115	292	269	215	139	0		
24					139	299	262	215	151	0		
25					157	299	262	215	121	0		
26					163	299	269	196	91	0		
27					157	299	269	189	69	0		
28					183	299	269	189	47	0		
29		-----			196	292	262	189	33	0		
30		-----			222	284	269	176	30	0		
31		-----		-----	241	-----	269	170	-----	0	-----	
TOTAL					1,548.0	8,060	8,254	7,297	4,082	96		
MEAN					62.8	269	266	235	136	3.10		
MAX					241	299	284	284	196	30		
MIN					0	241	248	170	30	0		
AC-FT					3,860	15,990	16,370	14,470	8,100	150		

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

43E 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	248	255	95	195			
2					0	248	248	100	189			
3					0	248	241	248	183			
4					0	235	228	255	176			
5					0	221	221	262	169			
6					53	221	221	262	90			
7					85	221	248	284	121			
8					105	235	235	284	232			
9					121	228	228	277	232			
10					127	228	235	284	232			
11					145	209	321	284	255			
12					163	221	259	277	255			
13					169	248	291	284	248			
14					195	262	284	284	248			
15					221	255	277	284	241			
16					215	329	277	269	241			
17					215	215	291	284	235			
18					215	228	284	291	228			
19					221	277	284	284	228			
20					241	255	277	277	221			
21					241	255	269	269	221			
22					228	314	262	262	215			
23					221	291	277	255	215			
24					235	299	277	262	209			
25					248	321	248	255	209			
26					235	291	248	248	202			
27					228	248	248	241	202			
28					235	241	195	228	202			
29		-----			221	269	176	221	209			
30		-----			228	262	163	209	67			
31		-----		-----	241	-----	157	202	-----		-----	
TOTAL					5,052	7,623	7,765	7,821	6,170			
MEAN					163	254	250	252	206			
MAX					248	329	321	291	255			
MIN					0	209	157	95	67			
AC-FT					10,020	15,120	15,400	15,510	12,240			

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

43B 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	196	262	262	235	71		
2					0	183	255	248	235	0		
3					0	183	248	241	228	0		
4					0	183	241	255	215	0		
5					0	183	241	262	202	0		
6					0	196	248	255	196	0		
7					0	196	255	255	196	0		
8					0	189	248	248	189	0		
9					0	183	262	241	183	0		
10					0	176	262	235	176	0		
11					0	196	255	235	170	0		
12					0	235	255	228	163	0		
13					0	262	248	235	157	0		
14					0	269	241	277	157	0		
15					0	277	255	307	151	0		
16					0	277	269	329	157	0		
17					0	262	269	337	170	0		
18					0	255	269	329	170	0		
19					0	248	269	314	157	0		
20					0	248	248	307	139	0		
21					5.0	248	241	292	133	0		
22					65	241	235	284	127	0		
23					115	248	235	284	121	0		
24					115	255	228	292	121	0		
25					110	262	228	292	115	0		
26					110	255	222	277	110	0		
27					145	255	222	262	105	0		
28					176	255	235	248	100	0		
29		-----			183	255	262	255	95	0		
30		-----			196	255	262	248	90	0		
31		-----		-----	202	-----	269	241	-----	0	-----	
TOTAL				0	1,422.0	6,926	7,739	8,375	4,763	71		
MEAN				0	45.9	231	250	270	159	2.29		
MAX				0	202	277	269	337	235	71		
MIN				0	0	176	222	228	90	0		
AC-FT				0	2,820	13,740	15,350	16,610	9,450	141		

## PARK BRANCH CANAL BELOW HEAD GATE

NUMBER

43B 02000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	176	235	262	176			
2					0	189	228	255	170			
3					0	215	215	255	157			
4					0	228	241	248	151			
5					0	241	255	248	145			
6					0	248	269	248	139			
7					0	241	284	241	157			
8					0	235	284	255	163			
9					0	235	209	255	139			
10					0	248	157	255	133			
11					0	262	262	255	127			
12					0	269	262	255	139			
13					0	269	262	255	157			
14					0	262	262	248	139			
15					0	262	262	262	133			
16					0	269	262	255	127			
17					0	269	262	255	121			
18					0	262	284	262	121			
19					44	262	277	269	170			
20					105	269	269	255	170			
21					105	269	269	241	133			
22					105	255	269	228	115			
23					105	235	269	228	58			
24					105	215	269	235	10			
25					121	215	262	222	6.5			
26					163	209	262	215	38			
27					163	196	262	222	183			
28					176	209	255	215	189			
29					202	222	248	202	183			
30		-----			189	235	269	189	183			
31		-----		-----	176	-----	277	183	-----		-----	
TOTAL					1,759	7,171	7,952	7,473	4,032.5			
MEAN					56.7	239	257	241	134			
MAX					202	269	284	265	189			
MIN					0	176	157	183	6.5			
AC-FT					3,490	14,220	15,770	14,820	8,000			





43B 02050 Park Branch Canal below 8 Mile flume near Emigrant, MT

LOCATION -- Lat.  $45^{\circ} 24' 45''$ , long  $110^{\circ} 41' 37''$ , in  $SE\frac{1}{4} SE\frac{1}{4} SE\frac{1}{4}$  sec. 12, T. 5 S., R. 8 E., Park County, on left bank 5.5 mi. (8.8 km) downstream from point of diversion which is at river mile 527.0 (847.9 km) 0.3 mi. (0.5 km) downstream from 8 Mile Cr. flume, 3.6 mi. (5.8 km) northeast of Emigrant.

DRAINAGE AREA -- Above point of diversion - 3,057 sq. mi. (7,918 sq. km).'

GAGE -- Water stage recorder. Altitude of gage 4,840 ft. (1,475 m) from topography map.

AVERAGE DISCHARGE -- 1965 to 1976 - 45,740 AF/season (56.4 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 248 ft.<sup>3</sup>/s (7.02 m<sup>3</sup>/s), August 21, 1966. Minimum discharge, no flow at times.

REMARKS -- Records good except for periods of extreme moss growth.

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMREP

438 02050

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1965

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						200	191	172	172			
2						205	191	44	181			
3						209	186	83	195			
4						209	181	191	191			
5						214	177	209	181			
6						214	172	209	172			
7						219	167	209	163			
8						219	163	209	149			
9						223	158	209	141			
10						228	154	209	132			
11						228	154	209	124			
12						228	149	209	116			
13						228	145	209	104			
14						223	145	209	76			
15						214	145	209	44			
16						205	145	209	0			
17						195	149	209	0			
18						195	154	209	0			
19						205	154	209	0			
20						219	158	205	0			
21						228	158	200	0			
22						238	163	200	0			
23						233	167	195	0			
24						228	167	195	21			
25						223	172	191	21			
26						219	172	186	21			
27						209	177	186	21			
28						205	181	181	21			
29		-----				200	181	181	21			
30		-----				195	186	177	19			
31		-----		-----		177	172	-----	-----			
TOTAL						6,458	5,139	5,894	2,286			
MEAN						215	166	150	76.2			
MAX						238	191	209	195			
MIN						195	145	44	0			
AC-FT						12,810	10,190	11,690	4,530			

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

438 02050

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1966

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						214	214	228	205			
2						209	214	228	219			
3						209	219	228	238			
4						214	219	233	238			
5						219	219	228	233			
6						219	219	228	233			
7						223	228	228	233			
8						223	223	228	233			
9						223	223	228	228			
10						228	223	228	223			
11						228	223	223	219			
12						223	228	223	214			
13						223	228	219	214			
14						223	223	219	223			
15						228	223	205	233			
16						228	219	200	228			
17						228	219	219	219			
18						233	214	238	223			
19						233	219	238	219			
20						228	219	243	219			
21						228	219	248	219			
22						228	223	243	214			
23						223	219	238	214			
24						223	219	238	209			
25						219	219	233	209			
26						219	219	228	191			
27						223	205	223	177			
28						223	70	223	172			
29		-----				219	205	214	158			
30		-----				219	214	209	154			
31		-----		-----		-----	214	209	-----			
TOTAL						6,680	6,642	7,018	6,411			
MEAN						223	214	226	214			
MAX						233	228	248	238			
MIN						209	70	200	154			
AC-FT						13,250	13,170	13,920	12,720			

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

43B 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						191	191	223	223			
2						200	177	223	223			
3						205	177	219	219			
4						209	181	214	219			
5						200	186	214	219			
6						209	177	214	219			
7						205	177	214	219			
8						200	177	205	219			
9						206	177	200	219			
10						205	167	195	219			
11						209	167	191	205			
12						214	172	191	191			
13						214	177	186	191			
14						214	177	158	186			
15						205	177	48	186			
16						219	172	195	186			
17						223	172	219	181			
18						223	195	219	181			
19						223	209	219	177			
20						223	205	219	172			
21						223	205	219	167			
22						219	200	219	163			
23						205	200	219	158			
24						195	200	219	158			
25						200	195	219	158			
26						200	195	219	154			
27						209	214	219	154			
28						205	209	219	154			
29		-----				200	223	223	154			
30		-----				200	223	223	156			
31		-----		-----		-----	223	223	-----		-----	
TOTAL						6,256	5,897	6,387	5,632			
MEAN						209	190	206	188			
MAX						223	223	223	223			
MIN						191	167	48	154			
AC-FT						12,410	11,700	12,670	11,170			

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

43B 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	193	184	218	180			
2					0	189	189	218	184			
3					0	189	193	229	189			
4					0	202	198	229	189			
5					0	189	202	229	189			
6					0	193	202	229	184			
7					0	202	207	235	171			
8					0	207	212	223	171			
9					25	198	223	131	171			
10					79	193	223	163	167			
11					70	189	223	218	159			
12					32	193	218	218	152			
13					98	189	212	223	145			
14					131	180	212	223	138			
15					131	175	218	229	138			
16					124	175	218	229	142			
17					124	180	218	229	138			
18					124	193	229	229	135			
19					128	198	229	218	124			
20					131	189	223	223	107			
21					135	193	229	218	79			
22					145	198	229	202	43			
23					152	198	229	193	29			
24					142	198	229	184	29			
25					135	193	229	180	29			
26					135	198	229	180	29			
27					135	202	223	175	26			
28					138	207	223	171	15			
29					156	202	229	171	13			
30		-----			171	189	229	175	13			
31		-----		-----	189	-----	223	175	-----		-----	
TOTAL					2,830	5,794	6,734	6,367	3,478			
MEAN					91.3	193	217	205	116			
MAX					189	207	229	235	189			
MIN					0	175	184	131	13			
AC-FT					5,610	11,490	13,360	12,630	6,900			

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

43P 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1						195	164	232	195			
2						195	164	237	186			
3						191	164	232	182			
4						200	164	200	186			
5						204	164	84	168			
6						218	164	218	164			
7						218	159	232	155			
8						118	155	232	150			
9						209	155	237	146			
10						222	155	242	146			
11						218	155	242	213			
12						213	150	218	204			
13						204	150	97	177			
14						186	164	227	168			
15						182	168	222	164			
16						182	168	222	155			
17						182	177	222	155			
18						186	177	222	159			
19						213	182	218	159			
20						218	182	218	177			
21						213	177	218	195			
22						204	177	213	182			
23						204	191	209	177			
24						209	200	209	159			
25						191	204	200	159			
26						168	204	209	155			
27						168	200	218	146			
28						168	200	213	142			
29		-----				164	204	204	138			
30		-----				164	213	204	134			
31		-----		-----		-----	222	200	-----		-----	
TOTAL						5,807	5,473	6,551	4,996			
MEAN						194	177	211	167			
MAX						222	222	242	213			
MIN						118	150	84	134			
AC-FT						11,520	10,860	12,990	9,910			

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

43B 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1						52	177	191	213			
2						134	177	195	204			
3						146	177	195	200			
4						146	186	200	191			
5						146	191	213	191			
6						146	191	218	204			
7						146	200	218	195			
8						146	195	218	195			
9						146	195	218	191			
10						146	195	218	173			
11						146	200	227	155			
12						146	195	232	126			
13						146	191	227	111			
14						142	191	227	104			
15						138	191	222	97			
16						138	182	222	90			
17						142	177	222	87			
18						142	177	213	87			
19						150	173	213	87			
20						164	186	210	90			
21						173	218	210	90			
22						186	213	210	87			
23						195	213	204	84			
24						195	213	218	81			
25						195	210	210	72			
26						200	204	210	67			
27						200	204	204	67			
28						195	195	204	57			
29		-----				200	195	204	47			
30		-----				191	191	195	43			
31		-----		-----		-----	195	204	-----		-----	
TOTAL						4,738	5,998	6,572	3,686			
MEAN						158	193	212	123			
MAX						200	218	232	213			
MIN						52	173	191	43			
AC-FT						9,400	11,900	13,040	7,310			

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

43R 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	126	177	204	204	130		
2					0	130	177	204	204	126		
3					0	138	172	208	204	126		
4					0	146	168	208	204	126		
5					0	154	168	208	195	126		
6					0	164	164	213	190	126		
7					0	168	159	208	190	122		
8					0	186	168	204	190	122		
9					0	186	155	204	190	114		
10					0	182	168	208	190	111		
11					0	195	172	208	186	108		
12					0	195	172	213	177	108		
13					0	195	168	218	172	104		
14					0	200	164	218	168	104		
15					0	204	168	218	154	57		
16					0	200	168	218	159	67		
17					2.7	204	159	213	154	64		
18					20	208	159	213	150	64		
19					62	208	154	208	150	50		
20					94	200	154	204	146	31		
21					90	208	154	200	142	16		
22					87	213	159	195	138	0		
23					84	204	168	186	138	0		
24					64	195	164	190	134	0		
25					111	200	164	204	130	0		
26					126	200	156	195	134	0		
27					138	204	168	186	130	0		
28					159	190	195	177	126	0		
29		-----			159	182	200	213	122	0		
30		-----			138	172	208	204	122	0		
31		-----		-----	134	-----	204	204	-----	0	-----	
TOTAL					1,498.7	5,557	5,261	6,354	4,893	2,042		
MEAN					48.3	185	170	205	163	65.9		
MAX					159	213	208	218	204	130		
MIN					0	126	154	177	122	0		
AC-FT					2,970	11,020	10,440	12,600	9,710	4,050		

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

43R 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	182	204	218	195			
2					0	177	200	213	182			
3					0	191	195	213	182			
4					0	195	186	213	168			
5					0	200	191	213	159			
6					0	204	195	218	182			
7					0	204	191	218	177			
8					0	218	182	222	200			
9					0	218	182	222	186			
10					9.5	200	182	191	191			
11					35	186	177	200	177			
12					57	195	177	204	150			
13					50	195	177	209	155			
14					70	204	177	213	168			
15					78	209	186	218	168			
16					84	204	195	209	168			
17					159	209	195	204	159			
18					146	213	195	204	155			
19					150	204	200	200	155			
20					150	204	200	204	168			
21					155	209	204	200	155			
22					155	209	200	195	146			
23					146	209	195	195	142			
24					150	209	195	200	138			
25					155	209	195	195	138			
26					155	204	200	195	130			
27					155	204	200	204	138			
28					168	204	200	204	164			
29					177	209	195	200	111			
30		-----			182	209	191	204	75			
31		-----		-----	186	-----	204	204	-----		-----	
TOTAL				0	2,772.5	6,087	5,966	6,402	4,782			
MEAN				0	89.4	203	192	207	159			
MAX				0	186	218	204	222	200			
MIN				0	0	177	177	191	75			
AC-FT				0	5,500	12,070	11,830	12,700	9,490			

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

438 02050

## DISCHARGE, IN CUBIC FEET PER SECONO, CALENOAR YEAR 1973

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1				0	11	173	200	200	168	23		
2				0	11	173	200	209	164	25		
3				0	11	164	209	209	146	23		
4				0	9.5	164	204	209	146	8.6		
5				0	8.0	173	204	209	142	0		
6				0	8.0	177	200	204	134	0		
7				0	6.5	186	195	204	134	0		
8				0	5.0	191	195	204	134	0		
9				0	5.0	191	195	195	150	0		
10				0	9.5	191	191	191	142	0		
11				0	17	182	191	186	130	0		
12				0	17	182	186	186	130	0		
13				0	19	182	186	182	122	0		
14				0	20	182	186	173	118	0		
15				0	22	182	195	159	142	0		
16				0	19	168	195	155	150	0		
17				0	20	164	200	173	142	0		
18				0	23	164	200	191	126	0		
19				0	39	168	204	204	118	0		
20				0	43	177	200	108	118	0		
21				0	72	182	204	159	126	0		
22				0	70	195	200	173	122	0		
23				0	81	204	195	177	118	0		
24				0	97	195	191	168	126	0		
25				0	101	60	191	155	94	0		
26				0	104	164	195	142	55	0		
27				0	97	213	200	138	45	0		
28				0	108	213	195	138	35	0		
29				11	122	204	195	155	25	0		
30				11	138	200	195	164	22	0		
31				-----	164	-----	195	155	-----	0	-----	
TOTAL				22	1,477.5	5,364	6,092	5,475	3,524	79.6		
MEAN				.73	47.7	179	197	177	117	2.57		
MAX				11	164	213	209	209	168	25		
MIN				0	5.0	60	186	108	22	0		
AC-FT				44	2,930	10,640	12,080	10,860	6,990	158		

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

438 02050

## DISCHARGE, IN CUBIC FEET PER SECONO, CALENOAR YEAR 1974

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	159	177	93	138			
2					0	163	177	65	150			
3					0	163	173	199	142			
4					0	159	163	195	138			
5					0	155	155	195	134			
6					29	150	159	195	90			
7					62	150	173	204	52			
8					70	163	168	204	186			
9					81	159	163	204	181			
10					81	159	155	199	177			
11					81	155	213	199	168			
12					90	155	204	191	168			
13					97	138	204	195	163			
14					107	204	199	195	163			
15					130	199	195	195	155			
16					130	204	191	186	150			
17					130	173	204	195	146			
18					134	104	191	199	146			
19					142	81	191	199	142			
20					155	75	191	191	138			
21					155	75	181	186	134			
22					150	84	173	181	130			
23					150	159	177	177	126			
24					154	159	186	177	126			
25					163	168	168	173	122			
26					159	173	159	168	118			
27					163	142	186	163	118			
28					155	134	173	159	115			
29					146	168	150	150	115			
30					159	186	150	142	49			
31				-----	163	-----	150	138	-----		-----	
TOTAL					3,236	4,516	5,459	5,516	4,080			
MEAN					104	151	177	178	136			
MAX					163	204	213	204	186			
MIN					0	75	150	65	49			
AC-FT					6,420	8,960	10,910	10,940	8,090			



## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

438 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OFC
1					0	130	168	185	164	52		
2					0	104	168	186	164	0		
3					0	94	173	182	150	0		
4					0	84	173	186	146	0		
5					0	84	159	200	146	0		
6					0	90	164	195	142	0		
7					0	94	168	191	142	0		
8					0	90	163	186	138	0		
9					0	84	173	182	150	0		
10					0	81	191	177	148	0		
11					0	87	186	173	138	0		
12					0	126	182	168	118	0		
13					0	159	177	177	115	0		
14					0	159	177	200	111	0		
15					0	164	186	209	108	0		
16					0	164	195	218	108	0		
17					0	159	195	182	118	0		
18					0	159	192	182	126	0		
19					0	159	182	173	111	0		
20					0	159	173	209	108	0		
21					7.4	159	168	200	101	0		
22					35	155	168	200	94	0		
23					72	159	164	200	90	0		
24					70	168	159	204	87	0		
25					70	177	155	204	81	0		
26					70	168	150	200	78	0		
27					84	164	150	186	72	0		
28					115	164	155	177	67	0		
29					118	164	186	177	65	0		
30		-----			138	164	186	177	65	0		
31		-----		-----	146	-----	195	168	-----	0	-----	
TOTAL				0	925.4	4,072	5,381	5,864	3,451	52		
MEAN				0	29.9	136	174	185	115	1.68		
MAX				0	146	177	195	218	164	52		
MIN				0	0	81	150	168	65	0		
AC-FT				0	1,840	8,080	10,670	11,630	6,850	103		

## PARK BRANCH CANAL BELOW 8 MILE FLUME

NUMBER

438 02050

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	108	164	200	126			
2					0	111	164	209	118			
3					0	126	150	204	115			
4					4.5	142	168	200	108			
5					3.0	155	186	204	101			
6					0	164	200	200	97			
7					0	164	209	195	111			
8					0	159	213	200	118			
9					0	155	108	204	101			
10					0	168	24	200	94			
11					0	182	186	195	87			
12					0	186	186	195	94			
13					0	186	186	195	108			
14					0	177	186	191	97			
15					0	168	191	191	90			
16					0	168	191	191	87			
17					0	150	195	191	81			
18					0	155	204	191	81			
19					67	159	200	195	108			
20					67	164	200	186	122			
21					67	159	200	173	94			
22					75	150	200	168	81			
23					72	142	200	164	55			
24					70	134	200	173	9.5			
25					70	138	200	164	6.5			
26					97	134	195	155	18			
27					97	134	195	159	122			
28					108	138	191	150	126			
29					126	150	191	146	122			
30		-----			118	159	204	138	118			
31		-----		-----	108	-----	213	134	-----		-----	
TOTAL					1,149.5	4,585	5,700	5,661	2,796.0			
MEAN					37.1	153	184	183	93.2			
MAX					126	186	213	209	126			
MIN					0	108	24	134	6.5			
AC-FT					2,280	9,090	11,310	11,230	5,550			



43B 03000 Paradise Canal below river syphon near Emigrant, MT

LOCATION -- Lat.  $45^{\circ} 24' 13''$ , long  $110^{\circ} 41' 58''$ , in SW $\frac{1}{4}$  SE $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 14, T. 5 S., R. 8 E., Park County, on the right bank 0.1 mi. (0.2 km) downstream from tail end of river siphon, 0.2 mi. (0.3 km) downstream from headgate structure which is 5 mi. (8 km) downstream from headgate of Park Branch Canal which is at river mile 527.0 (847.9 km), 2.9 mi. (4.7 km) northeast of Emigrant.

DRAINAGE AREA -- Above point of diversion (Park Branch Canal) 3,057 sq. mi. (7,918 sq. km).

GAGE -- Water stage recorder. Altitude of gage 4,850 ft. (1,478 m) from topography map.

AVERAGE DISCHARGE -- 1966 to 1976 - 17,480 AF/season (21.6 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 90 ft.<sup>3</sup>/s (2.55 m<sup>3</sup>/s), September 1968, June 1976. Minimum discharge, no flow at times.

REMARKS -- Records good except for periods of extreme moss growth. Paradise Canal is supplied by the Park Branch Canal.

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

43B 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1966

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						73	70	78	71			
2						73	70	78	73			
3						73	70	80	77			
4						73	70	82	77			
5						73	70	80	75			
6						73	70	80	77			
7						73	70	80	77			
8						75	70	80	75			
9						73	70	80	75			
10						73	68	80	73			
11						75	68	78	73			
12						75	70	77	73			
13						73	70	77	73			
14						73	70	77	75			
15						73	70	73	77			
16						75	70	73	75			
17						75	70	77	73			
18						73	70	80	73			
19						73	70	80	73			
20						73	71	80	73			
21						73	71	80	73			
22						75	71	80	73			
23						73	71	78	71			
24						73	71	78	71			
25						71	71	77	71			
26						71	70	75	70			
27						71	70	75	68			
28						71	45	73	66			
29		-----				71	41	71	66			
30		-----				70	58	71	66			
31		-----		-----		-----	75	71	-----		-----	
TOTAL						2,189	2,111	2,399	2,183			
MEAN						73.0	68.1	77.4	72.8			
MAX						75	75	82	77			
MIN						70	41	71	66			
AC-FT						4,340	4,190	4,760	4,330			

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

43B 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1967

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						77	77	73	77			
2						79	73	71	77			
3						79	71	71	77			
4						80	71	71	77			
5						79	73	60	75			
6						80	73	71	75			
7						79	73	70	75			
8						79	73	68	75			
9						79	73	68	75			
10						79	73	68	75			
11						79	71	66	73			
12						79	71	66	71			
13						79	71	66	71			
14						79	71	65	71			
15						79	71	51	70			
16						80	71	70	71			
17						80	71	75	70			
18						82	73	77	70			
19						82	73	77	70			
20						82	71	77	70			
21						84	70	77	70			
22						84	70	79	68			
23						80	68	79	68			
24						79	68	75	68			
25						79	66	79	68			
26						77	70	79	66			
27						79	70	77	66			
28						79	71	77	66			
29		-----				79	71	77	66			
30		-----				79	71	77	65			
31		-----		-----		-----	71	77	-----		-----	
TOTAL						2,390	2,210	2,238	2,136			
MEAN						79.7	71.3	72.2	71.2			
MAX						84	77	79	77			
MIN						77	66	51	65			
AC-FT						4,740	4,380	4,440	4,240			

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

43B 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	56	70	66	77			
2					0	60	70	71	79			
3					0	61	70	75	79			
4					0	63	71	77	77			
5					0	63	71	77	77			
6					0	70	71	77	79			
7					0	71	70	77	79			
8					0	71	70	75	79			
9					0	71	70	61	80			
10					0	71	70	70	82			
11					0	71	70	79	82			
12					0	71	71	82	84			
13					15	71	71	80	86			
14					42	68	71	80	86			
15					42	66	71	80	68			
16					42	66	71	80	88			
17					41	66	73	80	90			
18					41	68	75	80	90			
19					41	70	75	80	90			
20					39	70	73	80	90			
21					39	70	73	82	90			
22					41	70	71	80	90			
23					41	70	71	79	90			
24					45	70	70	79	90			
25					50	68	70	77	90			
26					50	71	70	77	88			
27					50	73	68	77	88			
28					50	75	68	75	90			
29					53	73	68	77	90			
30		-----			55	71	68	77	88			
31		-----		-----	56	-----	68	77	-----		-----	
TOTAL					833	2,055	2,189	2,384	2,556			
MEAN					26.9	68.5	70.6	76.9	85.2			
MAX					56	75	75	82	90			
MIN					0	56	68	61	77			
AC-FT					1,650	4,080	4,340	4,730	5,070			

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

43B 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						61	65	71	73	67		
2						65	65	73	73	67		
3						67	65	73	71	62		
4						67	64	70	52	61		
5						67	64	65	71	61		
6						68	64	59	71	61		
7						68	64	68	71	61		
8						52	62	74	71	61		
9						67	62	73	70	65		
10						70	61	73	70	65		
11						70	61	73	29	65		
12						68	59	70	0	55		
13						67	59	73	17	62		
14						65	59	74	38	62		
15						64	61	74	46	65		
16						64	62	73	68	64		
17						65	61	73	61	50		
18						68	61	74	55	14		
19						76	61	74	55	13		
20						78	61	74	58	13		
21						76	61	76	68	12		
22						74	61	74	74	12		
23						74	62	74	71	12		
24						74	65	74	70	12		
25						71	65	71	68	12		
26						68	67	73	68	12		
27						68	67	74	67	11		
28						68	67	74	65	12		
29		-----				67	68	74	65	11		
30		-----				67	70	73	65	11		
31		-----		-----		-----	70	73	-----	11	-----	
TOTAL						2,044	1,964	2,241	1,801	1,222		
MEAN						68.1	63.4	72.3	60.0	39.4		
MAX						78	70	76	74	67		
MIN						52	59	59	0	11		
AC-FT						4,050	3,900	4,450	3,570	2,420		

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

438 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						28	62	59	67			
2						38	61	59	67			
3						52	62	61	65			
4						52	64	61	64			
5						52	65	62	64			
6						52	65	64	65			
7						56	65	64	64			
8						62	64	65	65			
9						62	64	64	65			
10						61	62	62	62			
11						61	62	62	61			
12						61	64	62	59			
13						59	62	62	59			
14						59	62	62	59			
15						58	62	62	59			
16						58	61	62	58			
17						58	59	62	58			
18						58	58	62	58			
19						59	56	62	58			
20						61	59	62	58			
21						62	62	64	58			
22						64	62	65	58			
23						64	61	65	56			
24						64	61	67	56			
25						64	61	65	55			
26						67	61	65	55			
27						67	61	65	55			
28						67	61	65	55			
29		-----				65	61	65	53			
30		-----				64	59	64	53			
31		-----		-----		-----	61	65	-----		-----	
TOTAL						1,755	1,910	1,956	1,789			
MEAN						58.5	61.6	63.1	59.6			
MAX						67	65	67	67			
MIN						28	56	59	53			
AC-FT						3,480	3,790	3,880	3,550			

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

438 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	59	72	66	70	60		
2					0	58	72	68	70	59		
3					0	58	71	68	71	60		
4					0	60	70	68	71	60		
5					0	60	68	68	74	60		
6					0	62	68	68	71	60		
7					0	66	66	68	71	60		
8					0	78	68	68	71	60		
9					0	78	65	68	70	59		
10					0	78	66	68	70	58		
11					0	76	68	68	71	56		
12					0	76	68	68	70	56		
13					0	76	68	70	70	56		
14					0	76	68	70	70	54		
15					0	76	68	70	68	56		
16					0	74	68	70	66	54		
17					0	74	65	70	65	53		
18					0	76	65	70	64	53		
19					0	78	64	66	64	47		
20					0	78	64	66	62	36		
21					0	81	64	66	62	25		
22					16	83	64	64	60	4.2		
23					30	83	64	64	59	0		
24					31	78	64	64	58	0		
25					32	78	62	64	56	0		
26					35	78	60	62	58	0		
27					48	79	62	60	58	0		
28					58	76	66	59	58	0		
29		-----			59	74	66	53	56	0		
30		-----			59	72	66	70	58	0		
31		-----		-----	59	-----	66	68	-----	0	-----	
TOTAL					427	2,199	2,056	2,060	1,962	1,146.2		
MEAN					13.8	73.3	66.3	66.5	65.4	37.0		
MAX					59	83	72	70	74	60		
MIN					0	58	60	53	56	0		
AC-FT					847	4,360	4,080	4,050	3,890	2,270		

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

438 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	75	71	71	73			
2					0	73	70	70	70			
3					0	75	70	68	70			
4					0	77	68	68	66			
5					0	78	70	68	65			
6					0	78	70	68	70			
7					0	80	70	70	70			
8					0	80	70	70	73			
9					0	82	68	71	73			
10					0	78	68	66	75			
11					0	73	68	47	73			
12					0	77	66	68	68			
13					0	75	66	71	68			
14					0	77	66	71	70			
15					12	77	65	73	70			
16					20	77	66	73	70			
17					35	77	66	71	70			
18					65	77	68	71	68			
19					65	75	66	70	70			
20					63	73	65	70	73			
21					65	73	66	71	71			
22					63	75	66	70	68			
23					65	73	65	71	66			
24					68	75	65	71	66			
25					68	73	65	70	66			
26					68	71	65	70	65			
27					68	71	66	73	66			
28					71	71	65	73	75			
29					71	71	65	73	68			
30		-----			73	71	65	73	63			
31		-----		-----	75	-----	68	75	-----		-----	
TOTAL				0	1,015	2,258	2,078	2,165	2,079			
MEAN				0	32.7	75.3	67.0	69.8	69.3			
MAX				0	75	82	71	75	75			
MIN				0	0	71	65	47	63			
AC-FT				0	2,010	4,480	4,120	4,290	4,120			

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

438 03000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	68	70	64	16			
2					0	68	70	66	30			
3					0	66	71	66	33			
4					0	66	70	66	23			
5					0	66	68	66	21			
6					0	66	68	64	21			
7					0	70	68	64	21			
8					0	73	66	63	21			
9					0	71	68	63	21			
10					0	70	66	61	21			
11					0	68	64	61	21			
12					0	68	63	63	20			
13					0	68	61	61	20			
14					0	70	61	59	20			
15					0	70	63	57	21			
16					0	66	61	51	21			
17					0	66	61	50	20			
18					9.0	64	63	0	20			
19					26	66	63	0	20			
20					29	68	63	27	20			
21					29	68	63	61	20			
22					30	70	63	42	20			
23					33	71	63	38	18			
24					35	71	63	44	20			
25					45	70	63	56	18			
26					53	70	63	54	17			
27					53	73	64	54	15			
28					56	73	64	54	14			
29		-----			57	73	64	21	12			
30		-----			61	71	64	17	11			
31		-----		-----	68	-----	64	17	-----		-----	
TOTAL					584.0	2,068	2,006	1,530	596			
MEAN					18.8	68.9	64.7	49.4	19.9			
MAX					68	73	71	66	33			
MIN					0	64	61	0	11			
AC-FT					1,160	4,100	3,980	3,030	1,180			

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

438 03000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1974

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	81	83	34	41			
2					0	79	79	33	25			
3					0	79	79	56	25			
4					0	81	77	71	25			
5					0	83	76	74	25			
6					0	77	76	76	21			
7					20	77	77	77	31			
8					34	81	76	76	55			
9					38	83	74	76	55			
10					47	83	74	76	59			
11					57	79	77	76	65			
12					62	79	79	76	65			
13					63	85	77	76	65			
14					67	86	76	76	63			
15					71	85	76	76	63			
16					70	88	76	76	63			
17					68	81	79	73	63			
18					65	68	76	71	62			
19					63	65	77	71	62			
20					68	63	77	69	62			
21					69	65	77	69	62			
22					68	69	77	69	61			
23					69	79	77	68	61			
24					71	81	77	68	61			
25					77	83	74	68	61			
26					79	81	65	67	59			
27					79	76	62	56	59			
28					79	76	63	53	59			
29		-----			77	81	59	53	57			
30		-----			79	85	45	51	38			
31		-----		-----	79	-----	37	51	-----		-----	
TOTAL					1,619	2,359	2,254	2,062	1,573			
MEAN					52.2	78.6	72.7	66.5	52.4			
MAX					79	88	83	77	65			
MIN					0	63	37	33	21			
AC-FT					3,210	4,680	4,470	4,090	3,120			

## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

438 03000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

OAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	0	76	71	67	28		
2					0	12	78	68	67	9.5		
3					0	38	73	67	67	7.5		
4					0	37	74	67	58	6.5		
5					0	41	71	68	46	6.5		
6					0	49	74	67	47	6.5		
7					0	56	74	67	46	8.5		
8					0	68	71	64	40	6.5		
9					0	62	73	64	12	6.5		
10					0	58	73	64	12	6.5		
11					0	62	71	62	16	6.5		
12					0	74	71	61	31	6.5		
13					0	81	67	64	31	6.5		
14					0	81	65	68	31	6.5		
15					0	86	68	70	30	5.5		
16					0	86	71	71	30	5.5		
17					0	81	71	71	31	5.5		
18					0	76	70	71	31	5.5		
19					0	73	68	70	30	5.5		
20					0	73	67	70	30	4.5		
21					18	74	65	68	30	4.5		
22					26	78	65	68	31	4.5		
23					31	74	64	68	30	4.5		
24					30	76	65	70	30	4.5		
25					30	79	64	70	30	4.5		
26					30	76	65	68	30	3.5		
27					31	76	64	68	29	3.5		
28					33	73	67	68	29	3.5		
29		-----			33	73	73	68	29	3.5		
30		-----			11	74	71	68	29	3.5		
31		-----		-----	0	-----	73	67	-----	3.5	-----	
TOTAL				0	273	1,947	2,162	2,096	1,050	194.0		
MEAN				0	8.81	64.9	69.7	67.6	35.0	6.26		
MAX				0	33	86	78	71	67	28		
MIN				0	0	0	64	61	12	3.5		
AC-FT				0	542	3,860	4,290	4,160	2,080	385		



## PARADISE CANAL BELOW RIVER SYPHON

NUMBER

438 03000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					11	53	83	62	44			
2					13	65	76	62	44			
3					16	76	73	62	44			
4					21	81	79	62	43			
5					20	85	78	62	43			
6					20	86	76	62	43			
7					21	86	76	62	46			
8					23	86	71	62	46			
9					23	86	65	22	43			
10					23	88	56	0	41			
11					23	88	70	0	40			
12					25	88	70	23	41			
13					26	90	70	52	43			
14					28	86	67	52	41			
15					28	85	67	50	40			
16					26	85	67	49	38			
17					26	83	65	47	40			
18					28	83	67	47	41			
19					31	81	67	47	44			
20					33	78	67	50	46			
21					33	78	67	53	43			
22					37	78	68	52	41			
23					49	73	68	52	31			
24					49	70	70	52	8.5			
25					47	71	71	52	7.5			
26					52	71	71	50	13			
27					53	73	71	52	50			
28					53	73	71	50	52			
29					56	79	71	49	52			
30		-----			56	78	74	46	52			
31		-----		-----	53	-----	68	46	-----		-----	
TOTAL					1,003	2,383	2,180	1,489	1,201.0			
MEAN					32.4	79.4	70.3	48.0	40.0			
MAX					56	90	83	62	52			
MIN					11	53	56	0	7.5			
AC-FT					1,990	4,730	4,320	2,950	2,380			



43B 05000 Livingston Ditch below headgate near Livingston, MT

LOCATION -- Lat. 45° 35' 35", long 110° 34' 13", in NE¼ SE¼ NE¼ sec. 11, T. 3 S., R. 9 E., Park County, on right bank 0.2 mi. (0.3 km) downstream from point of diversion which is at river mile 501.8 (807.4 km), 4.5 mi. (7.2 km) south of Livingston.

DRAINAGE AREA -- 3,551 sq. mi. (9,197 sq. km).

GAGE -- Water stage recorder. Altitude of gage 4,550 ft. (1,387 m).

AVERAGE DISCHARGE -- 1968 to 1976 - 14,420 AF/season (17.8 cu. hm/season).

EXTREMES -- Period of record: Maximum discharge, 104 ft. <sup>3</sup>/s (2.95 m <sup>3</sup>/s), June 4, 1974. Minimum discharge, no flow at times.

REMARKS -- Record good except for periods of extreme moss growth.

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

43B 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1968

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	39	41	65	55			
2					0	46	41	65	51			
3					0	54	41	65	46			
4					0	51	43	65	41			
5					0	49	43	65	41			
6					0	48	43	65	41			
7					0	49	37	64	41			
8					0	48	25	64	41			
9					6.0	48	56	64	41			
10					30	49	59	65	40			
11					38	49	59	65	43			
12					44	50	60	65	40			
13					48	51	63	65	40			
14					48	50	63	65	40			
15					48	49	49	66	37			
16					46	48	25	66	41			
17					46	49	31	66	43			
18					46	50	50	66	41			
19					46	53	55	64	41			
20					51	53	61	55	41			
21					56	53	65	58	41			
22					61	51	66	56	40			
23					63	51	66	56	40			
24					55	48	66	55	40			
25					53	43	65	56	40			
26					53	43	65	56	40			
27					53	45	65	56	37			
28					53	46	65	56	37			
29					56	45	65	56	37			
30		-----			50	43	65	55	37			
31		-----		-----	40	-----	65	55	-----		-----	
TOTAL					1,090.0	1,451	1,663	1,905	1,234			
MEAN					35.2	48.4	53.6	61.5	41.1			
MAX					63	54	66	66	55			
MIN					0	39	25	55	37			
AC-FT					2,160	2,880	3,300	3,780	2,450			

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

43B 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1969

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						66	47	67	66			
2						66	47	67	67			
3						67	47	67	66			
4						68	47	67	66			
5						69	46	68	66			
6						69	46	67	66			
7						69	46	67	63			
8						69	46	68	63			
9						66	49	69	62			
10						66	51	69	62			
11						66	51	68	62			
12						66	51	67	62			
13						66	57	63	62			
14						64	59	66	62			
15						63	53	68	63			
16						63	26	67	63			
17						64	25	67	63			
18						67	31	66	63			
19						67	47	66	63			
20						68	51	66	63			
21						69	54	66	63			
22						66	57	67	58			
23						64	56	67	57			
24						63	59	67	57			
25						62	59	67	57			
26						61	50	67	57			
27						58	62	67	57			
28						56	63	66	57			
29		-----				52	63	66	59			
30		-----				47	63	66	61			
31		-----		-----		-----	63	66	-----		-----	
TOTAL						1,927	1,581	2,072	1,856			
MEAN						64.2	51.0	66.8	61.9			
MAX						69	63	69	67			
MIN						47	25	63	57			
AC-FT						3,820	3,140	4,110	3,680			

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

438 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1970

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						20	48	44	64			
2						21	50	61	61			
3						27	56	61	61			
4						35	56	66	61			
5						41	56	75	66			
6						46	61	78	66			
7						44	61	75	66			
8						46	59	75	66			
9						48	64	75	66			
10						52	61	75	66			
11						48	66	72	69			
12						48	64	72	69			
13						46	64	72	69			
14						46	59	72	36			
15						46	61	75	17			
16						46	64	82	17			
17						46	66	78	29			
18						46	64	75	32			
19						48	64	75	30			
20						50	64	72	29			
21						50	69	72	29			
22						54	72	72	29			
23						54	72	69	29			
24						56	69	69	29			
25						56	69	69	27			
26						56	69	66	27			
27						59	69	66	27			
28						59	69	64	27			
29		-----				54	69	64	27			
30		-----				50	33	61	27			
31		-----		-----		-----	16	61	-----		-----	
TOTAL						1,398	1,884	2,163	1,318			
MEAN						46.6	60.8	69.8	43.9			
MAX						59	72	82	69			
MIN						20	16	44	17			
AC-FT						2,770	3,740	4,290	2,610			

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

438 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	46	41	71	63	22		
2					0	44	39	71	60	27		
3					0	44	39	74	55	22		
4					0	44	39	77	48	20		
5					0	55	37	74	46	20		
6					0	58	37	74	46	18		
7					0	58	36	74	46	18		
8					0	58	37	74	42	18		
9					15	58	39	74	41	17		
10					30	55	39	71	41	17		
11					30	55	37	71	48	15		
12					30	55	37	71	46	10		
13					30	55	37	68	48	10		
14					30	55	36	68	42	11		
15					30	58	36	66	41	11		
16					30	58	41	68	39	9.4		
17					30	63	39	68	37	9.4		
18					28	68	44	42	36	9.4		
19					28	71	48	17	34	9.4		
20					27	68	60	41	32	9.4		
21					27	66	80	68	31	9.4		
22					27	66	77	68	30	8.5		
23					27	68	77	68	30	7.8		
24					28	71	74	71	30	7.8		
25					27	68	74	74	30	7.8		
26					28	63	71	74	30	7.8		
27					34	60	71	74	30	7.0		
28					44	50	68	71	30	6.2		
29		-----			48	42	68	71	30	7.0		
30		-----			48	41	68	68	26	5.5		
31		-----		-----	46	-----	71	63	-----	5.5	-----	
TOTAL					722	1,721	1,597	2,084	1,188	383.3		
MEAN					23.3	57.4	51.5	67.2	39.6	12.4		
MAX					48	71	80	77	63	27		
MIN					0	41	36	17	26	5.5		
AC-FT					1,430	3,410	3,170	4,130	2,360	760		

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

43B 05000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1972

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	68	66	60	45			
2					0	68	63	60	45			
3					0	68	63	60	49			
4					0	71	60	60	51			
5					0	77	60	60	51			
6					2.6	77	60	60	51			
7					6.3	77	60	60	51			
8					18	77	63	60	51			
9					22	74	63	63	49			
10					22	71	66	63	49			
11					22	71	71	66	51			
12					22	71	49	66	51			
13					19	71	18	66	51			
14					22	74	27	66	49			
15					28	74	68	66	49			
16					37	74	71	63	51			
17					39	84	71	60	51			
18					43	88	71	58	51			
19					45	81	74	58	51			
20					45	77	71	58	49			
21					47	71	68	58	47			
22					47	71	63	60	45			
23					47	71	60	60	45			
24					58	74	60	58	43			
25					60	68	60	55	43			
26					58	66	60	55	41			
27					60	63	60	51	41			
28					60	63	60	49	41			
29					58	63	60	49	36			
30		-----			60	63	60	49	36			
31		-----		-----	53	-----	60	47	-----		-----	
TOTAL				0	1,000.9	2,166	1,886	1,824	1,414			
MEAN				0	32.3	72.2	60.8	58.8	47.1			
MAX				0	60	88	74	66	51			
MIN				0	0	63	18	47	36			
AC-FT				0	1,990	4,300	3,740	3,620	2,800			

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

43B 05000

## DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1973

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	60	68	60	47	43		
2					0	63	66	58	47	45		
3					0	60	63	53	47	45		
4					30	55	60	53	47	45		
5					30	53	60	53	47	45		
6					30	55	58	53	47	45		
7					33	60	58	53	45	45		
8					33	60	55	49	47	41		
9					33	58	68	49	49	31		
10					36	55	71	49	49	31		
11					36	53	71	47	47	31		
12					36	55	66	47	47	31		
13					36	60	66	47	47	51		
14					37	68	47	45	47	25		
15					39	66	16	47	49	17		
16					39	60	23	45	49	16		
17					39	55	60	47	49	16		
18					39	55	66	47	47	16		
19					39	55	63	47	41	16		
20					39	66	63	45	43	16		
21					39	66	68	45	43	16		
22					41	68	74	45	43	12		
23					49	71	74	45	43	0		
24					53	71	71	45	43	0		
25					58	71	68	45	43	0		
26					58	68	68	45	45	0		
27					53	68	66	45	45	0		
28					51	68	66	43	43	0		
29					49	68	63	43	43	0		
30		-----			51	71	63	45	43	0		
31		-----		-----	55	-----	60	45	-----	0	-----	
TOTAL					1,161	1,862	1,900	1,485	1,372	656		
MEAN					37.5	62.1	61.6	47.9	45.7	21.3		
MAX					58	71	74	60	40	45		
MIN					0	53	16	43	41	0		
AC-FT					2,300	3,690	3,700	2,950	2,720	1,310		

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

438 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1					0	41	60	63	47			
2					0	41	57	63	47			
3					0	65	57	63	45			
4					0	104	55	60	45			
5					0	88	55	60	45			
6					0	60	55	57	43			
7					0	55	53	57	41			
8					9.2	57	53	57	39			
9					13	55	57	55	37			
10					13	53	55	55	35			
11					13	53	55	53	35			
12					13	55	45	53	34			
13					19	55	22	53	33			
14					23	88	39	53	33			
15					28	74	55	50	33			
16					35	55	53	50	31			
17					43	53	55	49	31			
18					45	33	60	49	31			
19					50	50	60	49	29			
20					57	55	63	55	31			
21					57	65	63	55	31			
22					55	68	63	53	31			
23					57	68	63	53	29			
24					60	71	65	53	29			
25					63	68	68	50	29			
26					68	68	74	50	28			
27					68	65	71	50	27			
28					57	65	71	49	28			
29		-----			45	68	68	50	28			
30		-----			41	63	65	49	28			
31		-----		-----	43	-----	65	49	-----		-----	
TOTAL					975.2	1,859	1,800	1,665	1,033			
MEAN					31.5	62.0	58.1	53.7	34.4			
MAX					68	104	74	63	47			
MIN					0	33	22	49	27			
AC-FT					1,930	3,690	3,570	3,300	2,050			

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

438 05000

DISCHARGE, IN CUBIC FEET PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1						0	45	68	49			
2						0	47	68	49			
3						0	47	66	49			
4						0	45	66	47			
5						21	43	63	47			
6						25	39	66	47			
7						25	41	66	45			
8						33	49	63	45			
9						31	49	63	45			
10						30	58	63	45			
11						31	55	58	43			
12						49	53	58	43			
13						49	51	58	43			
14						41	53	63	43			
15						39	63	60	43			
16						47	60	60	43			
17						49	58	60	43			
18						53	58	60	43			
19						47	55	55	43			
20						47	58	53	41			
21						47	55	53	41			
22						45	60	53	41			
23						47	63	51	41			
24						49	60	51	39			
25						51	60	53	34			
26						49	63	51	30			
27						49	63	51	28			
28						49	37	51	28			
29		-----				45	18	49	28			
30		-----				47	44	45	28			
31		-----		-----		-----	66	49	-----		-----	
TOTAL				0	0	1,095	1,616	1,798	1,234			
MEAN				0	0	36.5	52.1	58.0	41.1			
MAX				0	0	53	66	68	49			
MIN				0	0	0	18	49	28			
AC-FT				0	0	2,170	3,210	3,570	2,450			

## LIVINGSTON DITCH BELOW HEAD GATE

NUMBER

438 05000

## DISCHARGE, IN CU8IC FEET PER SECONO, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	OEC
1					0	60	43	47	30			
2					0	66	43	47	30			
3					0	66	43	47	28			
4					0	68	45	45	31			
5					0	68	53	43	33			
6					0	68	58	43	33			
7					0	63	60	41	33			
8					0	63	66	39	34			
9					0	63	63	39	33			
10					0	60	58	39	33			
11					0	60	20	39	34			
12					0	58	18	37	34			
13					0	58	58	37	34			
14					0	55	55	43	34			
15					0	49	53	41	34			
16					0	49	53	39	34			
17					4.2	51	51	37	33			
18					31	49	51	36	33			
19					26	49	51	36	33			
20					22	49	47	36	33			
21					21	49	47	33	31			
22					20	49	45	33	31			
23					22	47	45	33	31			
24					39	45	43	34	33			
25					39	43	43	33	33			
26					41	43	41	31	31			
27					49	41	43	31	30			
28					51	41	45	31	30			
29					58	41	45	30	30			
30		-----			55	43	45	30	30			
31		-----		-----	55	-----	43	30	-----		-----	
TOTAL					533.2	1,614	1,474	1,160	964			
MEAN					17.2	53.8	47.5	37.4	32.1			
MAX					58	68	66	47	34			
MIN					0	41	18	30	28			
AC-FT					1,060	3,200	2,920	2,300	1,910			



43C 00050 Daisy Creek near Cooke City, MT

LOCATION -- Lat.  $45^{\circ} 03' 28''$ , long.  $109^{\circ} 57' 57''$ , in NE $\frac{1}{4}$  SE $\frac{1}{4}$  SE $\frac{1}{4}$  Sec. 10, T. 9 S., R. 14 E., Park County, on right bank about 1 mile (1.6 km) above mouth, three miles (4.8 km) northwest of Cooke City, Montana.

DRAINAGE AREA -- 0.32 sq. mi. (0.83 sq. km.).

GAGE -- Water stage recorder. Datum of gage is 9308.90 ft. (2837.35 m).

AVERAGE DISCHARGE -- 1975 through 1976 - 462 AF/year (0.57 cu. hm/year).

EXTREMES -- Period of record: Maximum discharge,  $6.0 \text{ ft}^3/\text{s}$  ( $0.17 \text{ m}^3/\text{s}$ ), July 1-18-1975. Minimum discharge, no flow at times in November and December 1976.

REMARKS -- Records began in September 1974. Record is good except for periods of winter freeze-up.

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 DAISY CREEK BELOW MCLAREN MINE NR COOKE CITY, MT NUM8FR---43C 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1									.018	.006	.006	.002
2									.012	.006	.006	.002
3									.018	.012	.006	.002
4									.012	.012	.006	.002
5									.018	.018	.006	.002
6									.018	.033	.006	.002
7									.018	.018	.006	.002
8									.018	.012	.006	.002
9									.018	.018	.006	.002
10									.018	.012	.006	.002
11									.025	.012	.006	.002
12									.018	.018	.002	.002
13									.018	.012	.002	.002
14									.018	.012	.002	.002
15									.012	.018	.002	.002
16									.012	.012	.002	.002
17									.012	.006	.002	.002
18									.012	.012	.002	.002
19									.012	.006	.002	.002
20									.012	.006	.002	.002
21									.012	.006	.002	.002
22									.012	.025	.002	.002
23									.012	.018	.002	.002
24									.012	.006	.002	.002
25									.012	.006	.002	.002
26									.012	.012	.002	.002
27									.012	.012	.002	.002
28									.012	.018	.002	.002
29									.012	.012	.002	.002
30									.012	.012	.002	.002
31										.006		.002
TOTAL									.439		.394	.062
MEAN									.0146	.0127	.0035	.0020
MAX									.025	.033	.006	.002
MIN									.012	.006	.002	.002
									37900M	34000M	8990M	5360M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
 K = CUBIC KILOMETERS

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 DAISY CREEK BELOW MCLAREN MINE NR COOKE CITY, MT NUMBER---43C 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.002	.002	.002	.002	.002	.006	.17	.051	.018	.006	.003	.002
2	.002	.002	.002	.002	.002	.012	.17	.042	.018	.006	.003	.002
3	.002	.002	.002	.002	.006	.018	.17	.042	.018	.006	.003	.002
4	.002	.002	.002	.002	.006	.033	.17	.042	.012	.005	.003	.002
5	.002	.002	.002	.002	.006	.051	.17	.033	.012	.005	.003	.002
6	.002	.002	.002	.002	.006	.061	.17	.033	.006	.005	.003	.002
7	.002	.002	.002	.002	.006	.056	.17	.033	.006	.005	.003	.002
8	.002	.002	.002	.002	.006	.053	.17	.025	.006	.005	.003	.002
9	.002	.002	.002	.002	.006	.048	.17	.025	.006	.004	.003	.002
10	.002	.002	.002	.002	.006	.042	.17	.018	.006	.004	.003	.002
11	.002	.002	.002	.002	.006	.036	.17	.018	.002	.004	.003	.002
12	.002	.002	.002	.002	.006	.032	.17	.018	.002	.004	.003	.002
13	.002	.002	.002	.002	.006	.035	.17	.018	.002	.003	.003	.002
14	.002	.002	.002	.002	.006	.038	.17	.016	.002	.003	.003	.002
15	.002	.002	.002	.002	.006	.042	.17	.018	.002	.003	.003	.002
16	.002	.002	.002	.002	.006	.045	.17	.018	.002	.003	.002	.002
17	.002	.002	.002	.002	.006	.047	.17	.018	.002	.003	.002	.002
18	.002	.002	.002	.002	.006	.047	.17	.018	.003	.003	.002	.002
19	.002	.002	.002	.002	.006	.044	.16	.018	.003	.002	.002	.002
20	.002	.002	.002	.002	.006	.043	.15	.018	.003	.003	.002	.002
21	.002	.002	.002	.002	.006	.040	.13	.018	.004	.003	.002	.002
22	.002	.002	.002	.002	.006	.040	.12	.018	.004	.003	.002	.002
23	.002	.002	.002	.002	.006	.042	.11	.018	.004	.003	.002	.002
24	.002	.002	.002	.002	.006	.046	.094	.012	.004	.003	.002	.002
25	.002	.002	.002	.002	.006	.061	.093	.012	.005	.003	.002	.002
26	.002	.002	.002	.002	.006	.076	.072	.012	.005	.003	.002	.002
27	.002	.002	.002	.002	.006	.094	.061	.012	.005	.003	.002	.002
28	.002	.002	.002	.002	.006	.11	.051	.012	.005	.003	.002	.002
29	.002	.002	.002	.002	.006	.13	.051	.012	.006	.003	.002	.002
30	.002	.002	.002	.002	.006	.15	.051	.018	.006	.003	.002	.002
31	.002	.002	.002		.006		.051	.018		.003		.002
TOTAL	.062	.054	.062	.060	.182	1.578	4.244	.686	.179	.116	.075	.062
MEAN	.0020	.0020	.0020	.0020	.0059	.0526	.1370	.0221	.0060	.0037	.0025	.0020
MAX	.002	.002	.002	.002	.006	.15	.173	.051	.018	.006	.003	.002
MIN	.002	.002	.002	.002	.002	.006	.051	.012	.002	.003	.002	.002
	5363M	4840M	5360M	5180M	15700M	136000M	367000M	59300M	15500M	10000M	6480M	5360M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
 K = CUBIC KILOMETERS

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 DAISY CREEK BELOW MCLAFEN MINE NR COOKE CITY, MT NUMBER---43C 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.002	.001	.001	.001	.003	.032	.062	.052	.011	.046	.019	0
2	.002	.001	.001	.001	.004	.033	.063	.050	.010	.050	.016	0
3	.002	.001	.001	.001	.005	.034	.064	.048	.010	.054	.013	0
4	.001	.001	.001	.001	.006	.035	.065	.046	.010	.058	.020	0
5	.001	.001	.001	.001	.007	.036	.066	.044	.010	.062	.020	0
6	.001	.001	.001	.001	.008	.037	.067	.042	.013	.066	.010	.001
7	.001	.001	.001	.001	.009	.038	.068	.040	.015	.070	.009	0
8	.001	.001	.001	.001	.010	.039	.069	.038	.010	.074	.008	0
9	.001	.001	.001	.001	.011	.040	.070	.036	.010	.078	.007	0
10	.001	.001	.001	.001	.012	.041	.071	.034	.010	.082	.006	0
11	.001	.001	.001	.001	.015	.042	.072	.032	.010	.082	.005	0
12	.001	.001	.001	.001	.017	.043	.073	.030	.011	.079	.004	0
13	.001	.001	.001	.001	.019	.044	.074	.028	.010	.076	.010	0
14	.001	.001	.001	.001	.021	.045	.075	.026	.010	.073	.010	0
15	.001	.001	.001	.001	.021	.046	.076	.024	.010	.070	.002	0
16	.001	.001	.001	.001	.023	.047	.076	.022	.010	.067	.001	.001
17	.001	.001	.001	.001	.023	.048	.076	.020	.010	.064	.001	0
18	.001	.001	.001	.001	.023	.049	.076	.018	.010	.061	0	0
19	.001	.001	.001	.001	.023	.050	.076	.016	.010	.058	0	0
20	.001	.001	.001	.001	.024	.051	.076	.013	.010	.055	0	0
21	.001	.001	.001	.001	.024	.052	.074	.013	.010	.052	0	0
22	.001	.001	.001	.001	.025	.053	.072	.013	.010	.046	0	0
23	.001	.001	.001	.001	.025	.054	.070	.011	.014	.046	0	0
24	.001	.001	.001	.001	.026	.055	.068	.013	.018	.043	0	0
25	.001	.001	.001	.001	.026	.056	.066	.011	.022	.040	0	0
26	.001	.001	.001	.001	.027	.057	.064	.011	.026	.037	.001	.001
27	.001	.001	.001	.001	.027	.058	.062	.011	.030	.034	0	0
28	.001	.001	.001	.001	.028	.059	.060	.011	.034	.031	0	.001
29	.001	.001	.001	.001	.029	.060	.058	.011	.038	.028	0	.001
30	.001	.001	.001	.001	.030	.061	.056	.011	.042	.025	0	.001
31	.001	.001	.001	.001	.031	.061	.054	.011	.042	.022	0	0
TOTAL	.034	.029	.031	.031	.083	1.395	2.115	.786	.454	1.732	.162	.005
MEAN	.001	.001	.001	.001	.019	.046	.068	.025	.015	.056	.005	0
MAX	.002	.001	.001	.001	.031	.061	.076	.052	.042	.082	.020	.001
MIN	.001	.001	.001	.001	.003	.032	.054	.011	.010	.022	0	0
	2940M	2500M	2680M	2680M	50400M	121000M	183000M	67900M	39200M	150000M	14000M	432M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
 K = CUBIC KILOMETERS



43D 0050 Fisher Creek near Cooke City, MT

LOCATION -- Lat.  $45^{\circ} 03' 51''$ , long.  $109^{\circ} 56' 45''$ , in  $SE\frac{1}{4}$   $SW\frac{1}{4}$ ,  $NE\frac{1}{4}$  Sec. 11, T. 9 S., R. 14 E., Park County on left bank, three miles (4.8 km) above mouth, about three miles (4.8 km) north of Cooke City, Montana.

DRAINAGE AREA -- 0.41 sq. mi. (1.06 sq. km.)

GAGE -- Water stage recorder. Datum of gage is 9108.14 ft.

AVERAGE DISCHARGE -- 1975 through 1976 - 1,070 AF/year (1.32 cu. km./year).

EXTREMES -- Period of record: Maximum discharge,  $14.5 \text{ ft}^3/\text{s}$  ( $0.41 \text{ m}^3/\text{s}$ ), July 6, 1976. Minimum discharge,  $0.07 \text{ ft}^3/\text{s}$  ( $0.002 \text{ m}^3/\text{s}$ ), during most winter months.

REMARKS -- Records began in September 1974. Record is good except for periods of winter freeze-up.

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 FISHER CREEK BELOW GLENGARY MINE NR COOKE CITY, MT NUMBER---430 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1									.018	.012	.006	.006
2									.018	.012	.006	.006
3									.018	.012	.006	.006
4									.018	.012	.012	.006
5									.018	.012	.012	.006
6									.018	.012	.012	.006
7									.018	.012	.006	.006
8									.018	.012	.006	.006
9									.018	.012	.006	.006
10									.018	.012	.006	.006
11									.018	.012	.006	.006
12									.018	.012	.006	.006
13									.018	.006	.006	.006
14									.018	.012	.006	.006
15									.018	.006	.006	.006
16									.018	.006	.006	.006
17									.012	.006	.012	.006
18									.012	.006	.006	.006
19									.012	.006	.006	.006
20									.012	.006	.006	.002
21									.012	.012	.006	.002
22									.012	.006	.006	.002
23									.012	.012	.006	.002
24									.012	.006	.006	.002
25									.012	.006	.006	.002
26									.012	.006	.006	.002
27									.012	.006	.006	.002
28									.012	.006	.006	.002
29									.012	.006	.006	.002
30									.012	.006	.006	.002
31									.012	.012	.006	.002
TOTAL									.456	.282	.204	.138
MEAN									.015	.0091	.0068	.0045
MAX									.018	.012	.012	.006
MIN									.012	.006	.006	.002
									39400M	24400M	17600M	11900M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
 K = CUBIC KILOMETERS

MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 FISHER CREEK BELOW GLENGARY MINE NR COOKE CITY, MT NUMBER---430 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1975

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.002	.002	.002	.002	.002	.025	.34	.066	.013	.018	.007	.007
2	.002	.002	.002	.002	.002	.042	.37	.054	.014	.018	.007	.007
3	.002	.002	.002	.002	.002	.061	.34	.041	.014	.018	.007	.007
4	.002	.002	.002	.002	.002	.061	.35	.028	.016	.018	.007	.007
5	.002	.002	.002	.002	.002	.083	.37	.016	.016	.018	.007	.007
6	.002	.002	.002	.002	.002	.12	.41	.016	.018	.018	.007	.007
7	.002	.002	.002	.002	.002	.13	.37	.016	.018	.018	.010	.007
8	.002	.002	.002	.002	.002	.12	.37	.015	.018	.018	.007	.007
9	.002	.002	.002	.002	.002	.083	.37	.015	.018	.018	.007	.007
10	.002	.002	.002	.002	.002	.083	.35	.014	.025	.018	.007	.007
11	.002	.002	.002	.002	.002	.094	.34	.014	.025	.018	.007	.007
12	.002	.002	.002	.002	.002	.12	.30	.014	.025	.018	.007	.007
13	.002	.002	.002	.002	.006	.16	.34	.014	.025	.012	.007	.007
14	.002	.002	.002	.002	.006	.19	.30	.015	.033	.018	.007	.007
15	.002	.002	.002	.002	.006	.17	.32	.015	.033	.012	.007	.007
16	.002	.002	.002	.002	.012	.16	.30	.015	.033	.007	.007	.007
17	.002	.002	.002	.002	.012	.13	.28	.015	.033	.007	.007	.007
18	.002	.002	.002	.002	.012	.12	.28	.016	.033	.007	.007	.007
19	.002	.002	.002	.002	.012	.11	.27	.016	.025	.007	.007	.007
20	.002	.002	.002	.002	.006	.094	.25	.016	.025	.007	.007	.007
21	.002	.002	.002	.002	.006	.083	.23	.016	.025	.007	.007	.007
22	.002	.002	.002	.002	.006	.088	.22	.016	.025	.018	.007	.007
23	.002	.002	.002	.002	.006	.11	.20	.016	.025	.010	.007	.007
24	.002	.002	.002	.002	.006	.13	.19	.016	.025	.010	.007	.007
25	.002	.002	.002	.002	.006	.15	.17	.016	.025	.007	.010	.007
26	.002	.002	.002	.002	.006	.13	.16	.016	.025	.007	.010	.007
27	.002	.002	.002	.002	.006	.15	.15	.016	.025	.007	.007	.007
28	.002	.002	.002	.002	.006	.16	.13	.016	.025	.007	.007	.007
29	.002	.002	.002	.002	.012	.20	.12	.015	.025	.007	.007	.007
30	.002	.002	.002	.002	.018	.27	.11	.014	.018	.007	.007	.007
31	.002		.002		.018		.083	.013		.007		.007
TOTAL	.062	.056	.062	.060	.192	3.647	8.383	.601	.703	.387	.225	.217
MEAN	.0020	.0020	.0020	.0020	.0062	.1220	.2700	.0194	.0234	.0125	.0075	.0070
MAX	.002	.002	.002	.002	.018	.270	.410	.066	.033	.018	.010	.007
MIN	.002	.002	.002	.002	.002	.025	.083	.013	.025	.007	.007	.007
	5360M	4840M	5360M	5180M	16600M	315000M	724000M	51900M	60700M	33400M	19400M	18700M

M = CUBIC METERS  
 H = CUBIC HECTOMETERS  
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MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION ----- WATER RESOURCES DIVISION  
 FISHER CREEK BELOW GLENJARY MINE NR COOKE CITY, MT NUMBER---430 00050  
 DISCHARGE, IN CUBIC METERS PER SECOND, CALENDAR YEAR 1976

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.007	.005	.002	.002	.006	.16	.37	.072	.018	.006	.006	.002
2	.007	.005	.002	.002	.006	.17	.34	.061	.018	.006	.002	.002
3	.007	.005	.002	.002	.009	.20	.32	.061	.018	.006	.002	.002
4	.007	.005	.002	.002	.012	.25	.30	.061	.018	.006	.002	.002
5	.007	.005	.002	.002	.009	.27	.32	.051	.018	.006	.007	.002
6	.007	.005	.002	.002	.006	.30	.32	.051	.018	.011	.007	.002
7	.007	.005	.002	.002	.005	.30	.32	.041	.018	.011	.006	.002
8	.007	.005	.002	.002	.012	.30	.30	.041	.011	.006	.002	.002
9	.007	.005	.002	.002	.018	.30	.28	.041	.011	.006	.002	.002
10	.007	.005	.002	.002	.018	.30	.27	.033	.011	.006	.002	.002
11	.007	.005	.002	.002	.018	.27	.23	.033	.011	.006	.006	.002
12	.007	.005	.002	.002	.018	.20	.22	.033	.011	.006	.006	.002
13	.007	.005	.002	.002	.018	.16	.20	.033	.011	.006	.006	.002
14	.007	.005	.002	.002	.025	.13	.17	.033	.011	.006	.006	.002
15	.007	.005	.002	.002	.025	.12	.16	.033	.011	.006	.006	.002
16	.007	.005	.002	.002	.033	.12	.15	.033	.011	.006	.006	.002
17	.007	.005	.002	.002	.031	.094	.15	.025	.011	.006	.002	.002
18	.007	.005	.002	.002	.061	.082	.15	.025	.011	.011	.002	.002
19	.007	.005	.004	.002	.083	.094	.13	.025	.018	.011	.002	.002
20	.007	.005	.004	.002	.094	.12	.12	.025	.011	.006	.002	.002
21	.007	.005	.004	.002	.11	.16	.12	.025	.011	.006	.002	.002
22	.007	.005	.004	.002	.12	.20	.11	.025	.011	.006	.002	.002
23	.007	.005	.004	.002	.12	.17	.11	.025	.011	.006	.002	.002
24	.007	.005	.004	.004	.13	.15	.094	.025	.011	.006	.002	.002
25	.005	.005	.002	.004	.13	.15	.094	.025	.011	.006	.002	.002
26	.005	.005	.002	.004	.12	.13	.083	.025	.011	.006	.002	.002
27	.005	.005	.002	.004	.15	.15	.083	.018	.011	.006	.002	.002
28	.005	.002	.002	.004	.17	.17	.072	.018	.006	.006	.002	.002
29	.005	.002	.002	.004	.19	.22	.072	.018	.006	.006	.002	.002
30	.005	.002	.002	.006	.14	.28	.072	.018	.006	.006	.002	.002
31	.005	.002	.002	.006	.16	.16	.072	.018	.006	.006	.002	.002
TOTAL	.203	.139	.074	.076	2.121	5.740	5.802	1.051	.378	.206	.092	.062
MEAN	.007	.005	.002	.003	.066	.191	.187	.034	.013	.007	.003	.002
MAX	.007	.005	.004	.006	.19	.32	.37	.072	.018	.011	.006	.002
MIN	.005	.002	.002	.006	.006	.082	.072	.018	.006	.006	.007	.002
	175004	120004	63900M	65700M	183000M	496000M	501000M	90800M	32700M	17800M	7450M	5360M

M = CUBIC METERS  
 L = LITERS  
 K = KILOMETERS







